S/M No. : T150S0A003

Service Manual

Microwave Oven

Model: KOT-150S0A
KOT-151S0A
KOT-152U0A
KOT-152C0A
KOT-155S0A

DAEWOO ELECTRONICS CO., LTD.
http : //svc.dwe.co.kr Feb. 2002

PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

(a) Do not operate or allow the oven to be operated with the door open.

(b) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs if necessary: (1) Interlock operation, (2) Proper door closing, (3) Seal and sealing surfaces (arcing, wear, and other damage), (4) Damage to or loosening of hinges and latches, (5) Evidence of dropping or abuse.

(c) Before turning on power to the microwave oven for any service test or inspection within the microwave generating compartments, check the magnetron, wave guide or transmission line, and cavity for proper alignment, integrity, and connections.

(d) Any defective or misadjusted components in the interlock, monitor, door seal and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.

(e) A microwave leakage check to verify compliance with the Federal performance standard should be performed on each oven prior to release to the owner.

TABLE OF CONTENTS

PROPER USE AND SERVICE PRECAUTIONS 2

SPECIFICATIONS 3

EXTERNAL VIEW 4

INSTALLATION 4

OPERATIONS AND FUNCTIONS 4

DISASSEMBLY AND ASSEMBLY 5

TROUBLE SHOOTING GUIDE 33

MEASUREMENT AND TEST 34

WIRING DIAGRAM 42

PRINTED CIRCUIT BOARD 46

EXPLODED VIEW AND PARTS LIST 61

PROPER USE AND SERVICE PRECAUTIONS

CAUTION :

This Device is to be Serviced Only by Properly Qualified Service Personnel.
Consult the Service Manual for Proper Service Procedures to Assure Cotinued Safey Operation and for Precautions to be Taken to Avoid Possible Exposure to Excessive Microwave Energy.

1. FOR SAFE OPERATION

Damage that allows the microwave energy (that cooks or heats the food) to escape will result in poor cooking and may cause serious bodily injury to the operator. IF ANY OF THE FOLLOWING CONDITIONS EXIST, OPERATOR MUST NOT USE THE APPLIANCE.(Only a trained service personnel should make repairs.)

1) A broken door hinge.
2) A broken door viewing screen.
3) A broken front panel, oven cavity.
4) A loosened door lock.
5) A broken door lock.

The door gasket plate and oven cavity surface should be kept clean.
No grease, soil or spatter should be allowed to build up on these surfaces or inside the oven.
DO NOT ATTEMPT TO OPERATE THIS APPLIANCE WITH THE DOOR OPEN. The microwave oven has concealed switches to make sure the power is turned off when the door is opened. Do not attempt to defeat them. DO NOT ATTEMPT TO SERVICE THIS APPLIANCE UNTIL YOU HAVE READ THIS SERVICE MANUAL.

2. FOR SAFE SERVICE PROCEDURES

1) If the oven is operative prior to servicing, a microwave emission check should be performed prior to servicing the oven.
2) If any certified oven unit is found to have excessive emission level 5mW/cm^2, the service person should:
   (a) inform the manufacturer, importer or assembler,
   (b) repair the unit at no cost to the owner,
   (c) attempt to ascertain the cause of the excessive leakage,
   (d) tell the owner of the unit not to use the unit until the oven has been brought into compliance.
3) If the oven operates with the door open, the service person should tell the user not to operate the oven and contact the manufacturer and CDRH immediately.

CAUTION :

Microwave Radiation
Personnel Should not Be Exposed to the Microwave Energy Which May Radiate from the Magnetron or Other Microwave Generating device if it is Improperly Used or Connected. All Input and Output Microwave Connections. Wave-Guides, Flanges and Gaskets Must be Secured. Never Operate the Device Without a Microwave Energy Absorbing Load Attached. Never Look Into an Open waveguide or Antenna While the Device is Energized.

SPECIFICATIONS

Model		KOT-150S, KOT-151S, KOT-152U, KOT-152C, KOT-155S
Power Supply		120V ~ 60 Hz
Rated Current		14.0 A (microwave oven only).
Microwave	Power Consumption	1600W, Max.
	Output Power (IEC 705)	1000W
	Frequency	2450 MHz ±50 MHz
Outside Dimensions (WxHxD)		760x427x375 mm
Cavity Dimensions (WxHxD)		492x240x340 mm
Net Weight		24.5Kg
Timer		Digital, 99 min 99sec
Power Selections		10 Levels
Cavity Volume		1.5 ft^3
Magnetron cooling		Forced air
Microwave Distribution		Stirring fan disk and turntable
Rectification voltage doubler, half-wave.		
Door Sealing		Choke System
Safety Device	Cavity Thermostat	open : 194/90, reset : 32/0
	Bottom Thermostat	open : 194/90, reset : 32/0
	Hood Thermostat	open : 104/40, reset : 132.8/56
	Line Fuse	20 A
	Door Interlock Switches	Primary Interlock Switch.
		Secondary Interlock Switch.
		Interlock Monitor.
Magnetron type		2M218
High Voltage Capacitor		0.98 2.1KV AC
High Voltage Diode		350 mA, 9.0 KV
Cook-top Lamp		125V, 30W
Cavity Lamp		125V, 30W
Tray		Glass

** SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.*

EXTERNAL VIEW

; REFER TO THE INSTALLATION GUIDE

INSTALLATION

; REFER TO THE INSTALLATION GUIDE

OPERATIONS AND FUNCTIONS

; REFER TO THE USE AND CARE MANUAL

DISASSEMBLY AND ASSEMBLY

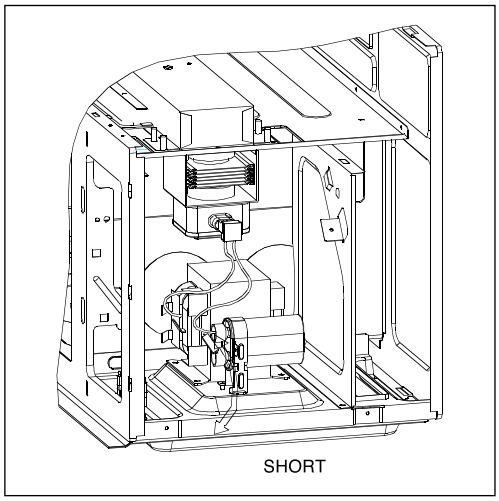
Caution to be observed when trouble shooting

Unlike many ther applicances, the microvave oven is high-voltage, high-current equipment.
It is completely safe during normal operation. However, carelessness is servicing the oven can result in an electronic shock or possible danger from a short circuit. You are asked to observe the following precautions carefully.

1. Always remove the power plug from the outlet before servicing.
2. Use an insulated screwdriver and wear rubber gloves when servicing the high voltage side.
3. Discharge the high voltage capacitor before touching any oven components or wiring.

   1) Check the grounding.
      Do not operate on a two-wire extension cord.
      It is imperative, therefore, make sure it is grounded properly before beginning repair work.

   2) Warning about the electric charge in the high voltage capacitor.
      For about 30 seconds after the operation has stopped an electric charge remains in the high voltage capacitor.
      When replacing or checking parts, short between oven chassis and the negative high terminal of the high voltage capacitor by using a properly insulated screwdrive to discharge.



4. When the 20A fuse is blown due to the operation for the monitor switch; replace primary interlock switch, secondary interlock switch and interlock monitor switch.
5. After repair or replacement of parts, make sure theat the screws are properly tightened, and all electrical connections art tightened.
6. Do not operate without cabinet.

CAUTION :

Service personnel should remove their watches whenever working close to or replacing the magnetron.

CAUTION :

When servicing the appliance, take a care when touching or replacing high potential parts because of electrical shock or exposing microwave. These parts are as follows-HV Transformer, Magnetron, HV Capacitor, HV Diode.

1. GENERAL

-REMOVING/REINSTALLING

WARNING :

Personal Injury Hazard
Disconnect from the electrical supply before servicing the unit. Failure to do so could result in electrical shock or other personal injury.

CAUTION :

Personal Injury Hazard
Because of the weight and size of the microwave oven, two people are required to safely move and install it. Failure to do so could result in personal injury.

-CABINET

CABINET REMOVAL

Refer to FIG. 1 for the following steps:

1. Remove the microwave oven from its mounting location and set it on a protected (padded) work surface.
2. Remove the two screws from the top of the microwave oven that secure the vent grille to the oven, and pull the top of the vent grille out so the tabs are from their slots, and remove it.
3. Remove 2 screw from the vent motor cover.
4. Remove the remaining 9screws from the top side and rear of the cabinet. Slide the cabinet back and unhook it from the side tabs, then slide the power cord into the cabinet, and lift the cabinet off the oven.
   Proceed to the section for the component you wish to service.

CABINET INSTALLATION

Refer to FIG. 1 for the following steps:

1. Position the cabinet over the top of the microwave oven and slide the power cord all the way through the top opening.
2. Slide the cabinet forward so that the tabs along the sides of the microwave fit into the corresponding slots in the cabinet.
3. Loosely mount the screws to the top and sides of the cabinet. When all of the screws are installed, tighten them securely.
4. Install the vent grille on the oven with the two long screws.
5. Install the oven in its mounting location.

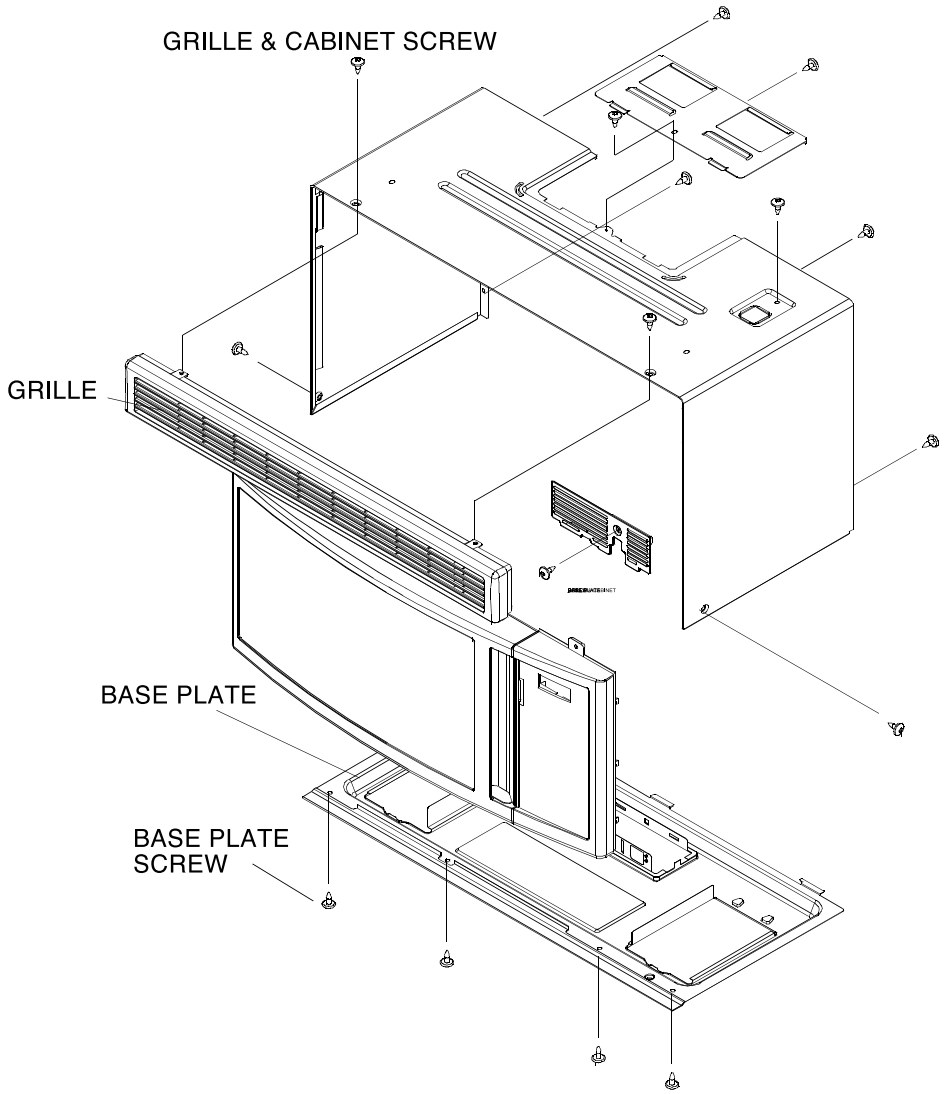


FIG. 1

2.THE OPERATING CONTROL SYSTEMS

-REPLACING THE CONTROL CIRCUIT BOARD

WARNING :

This Device is to be Serviced Only by Properly Qualified Service Personnel.
Consult the Service Manual for Proper Service Procedures to Assure Continued Safety Operation and for Precautions to be Taken to Avoid Possible Exposure to Excessive Microwave Energy.

1. Remove the two screws from the top of the microwave oven for the vent grille and remove the grille(See FIG. 1).
Refer to FIG. 2, FIG. 2-1 for the following steps:

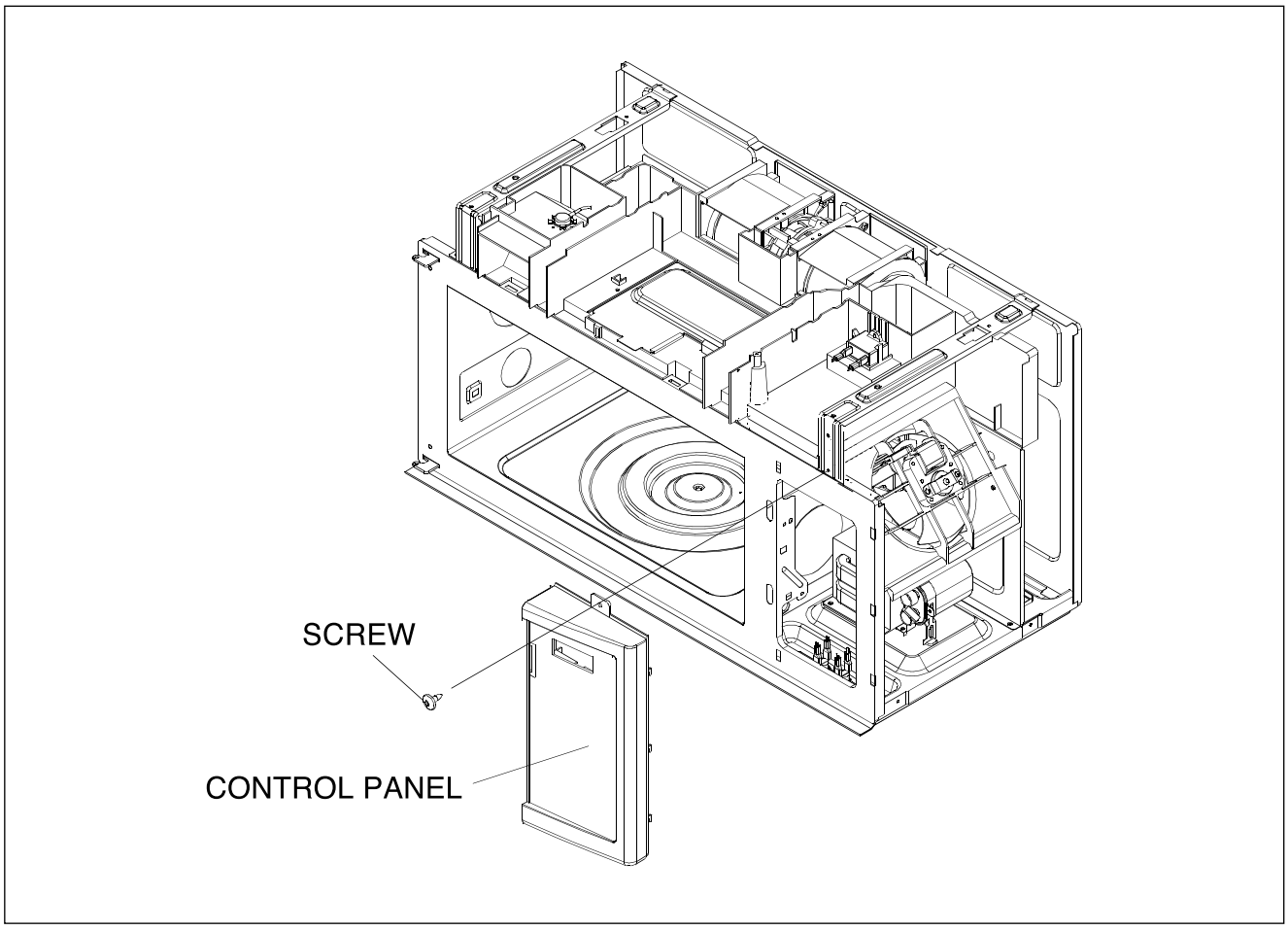


FIG. 2

2. Remove the screw from the front of the microwave oven for wire protector and remove the wire protector(see FIG. 1).
3. Remove the screw from the top center tab of the control panel.
4. From the top and back of the control panel, lift the top locking tab and pull the top of the panel out slightly, then lift the bottom tabs of the panel out of the slots and pull it forward.

IMPORTANT: Please mark or photograph the wires before disconnecting them to ensure proper reconnection. If you are sending a control panel assembly for repair, please skip the steps marked "X" below.

4. Unplug the following connectors from the control circuit board:
   a) 2-Pin connector at CN2.
   b) 2-Pin connector on relay RY1. (mark carefully)
   c) 3-Pin connector at CN5.
   d) 6-Pin connector at CN4.
   e) 6-Pin connector at CN3 (Only sensor type model).
   f) Lift the end of the locking arm on the ribbon cable at CN1, then lift the ribbon cable out of the socket.

X 5. Remove 4 screws from the control circuit board and lift the board off the mounting bracket.

X 6. Clean the surface of the new display and the inside of the control panel window with a soft, damp cloth to remove any dirt, smudges, or lint.

X 7. Mount the new control circuit board to the mounting bracket with 4 screws.

8. Plug the following connectors over their control circuit board plugs so that they lock into place:
   a) 2-Pin connector at CN2.
   b) 2-Pin connectors on relay RY1.
   c) 3-Pin connector at CN5.
   d) 6-Pin connector at CN4.
   e) 6-Pin connector at CN3 (Only sensor type model).
   f) Insert the end of the ribbon cable into the narrow slot of connector CN1 as far as it will go(See FIG. 2-2). Lower the locking arm so that the two small tabs fit into the cutouts of the ribbon cable, then press down so that it locks into place.
9. Mount the control panel to the oven and secure it with its mounting screw.
10. Mount the vent grille to the microwave oven and check out the operation.

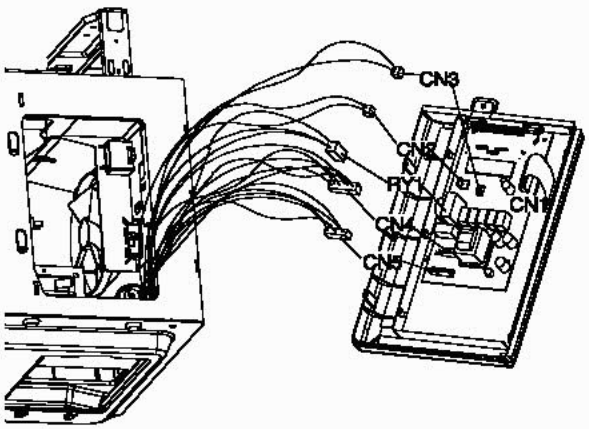


FIG. 2-1

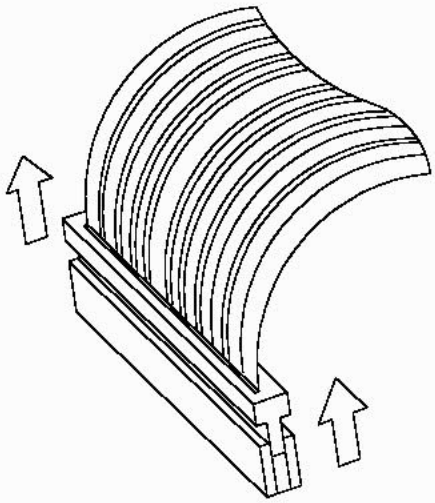


FIG. 2-2

3. REPLACING STIRRER MOTOR

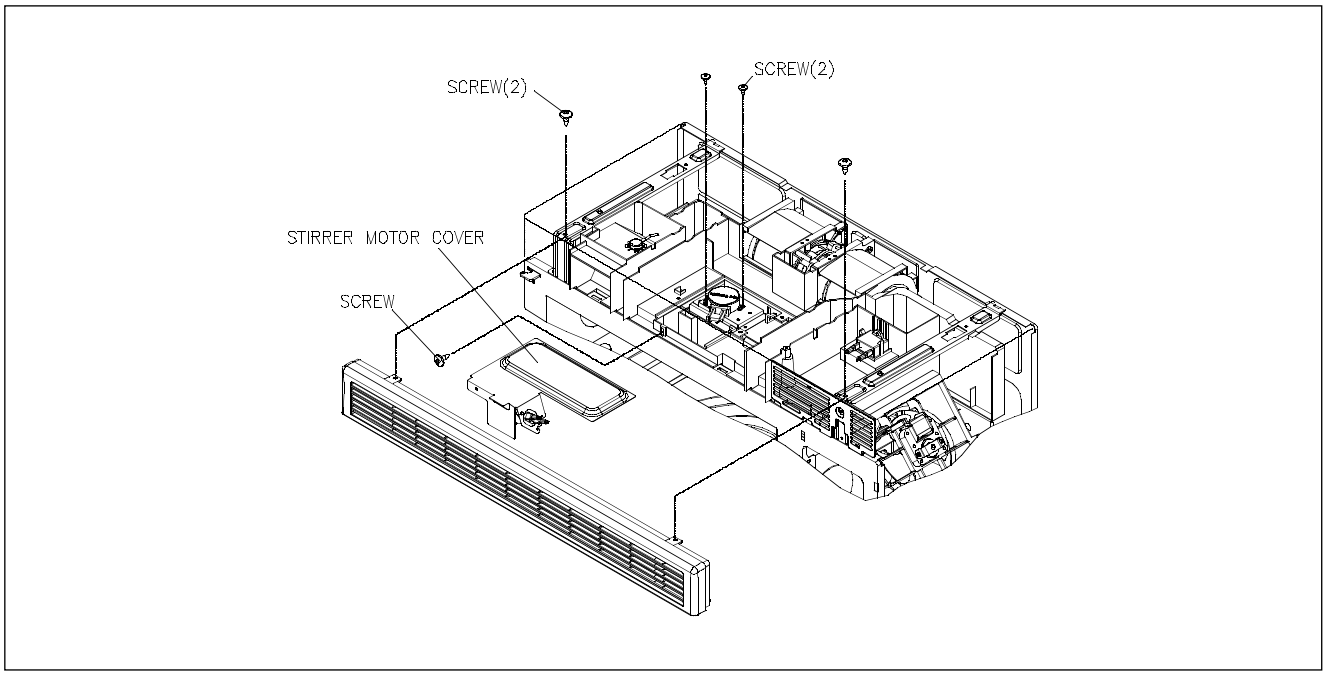


FIG. 3

WARNING :

Personal Injury Hazard
Disconnect from the electrical supply before servicing the unit. Failure to do so could result in electrical shock or other personal injury.

CAUTION :

Personal Injury Hazard
Because of the weight and size of the microwave oven, two people are required to safely move and install it. Failure to do so could result in personal injury.

1. Remove the vent grille from the microwave oven (See Cabinet Removal for this procedure).

Refer to FIG. 3 and the insets for the following steps:

2. Remove the screw from the lamp bracket(stirrer motor cover).
3. Pull the connectors off the stirrer motor terminals.
4. Remove 2 mounting screws from the stirrer motor and remove the motor.
5. Mount the new stirrer motor to the oven with its two mounting screws.
6. Connect the wires to the stirrer motor terminals.
7. Reinstall stirrer motor cover.
8. Refer to Cabinet Installations and reinstall the vent grille on the microwave oven.

4. REPLACING AN OVEN LIGHT SOCKET

WARNING :

Personal Injury Hazard
Disconnect from the electrical supply before servicing the unit. Failure to do so could result in electrical shock or other personal injury.

1. Remove the screws for the vent grille and remove the grille.(See FIG. 1 on page)
2. Remove the screw from cavity lamp bracket and pull out.
3. Remove the socket mounting screw from the cavity lamp bracket.
4. Remove the old light socket, and mount the new socket in its place with its mounting screw.
5. Reattach the wire connectors over the light socket terminals.
6. Reinstall the cavity lamp bracket into its air guide top and secure the cavity lamp bracket with its mounting screw.
7. Mount the vent grille to the microwave oven and check out the operation.

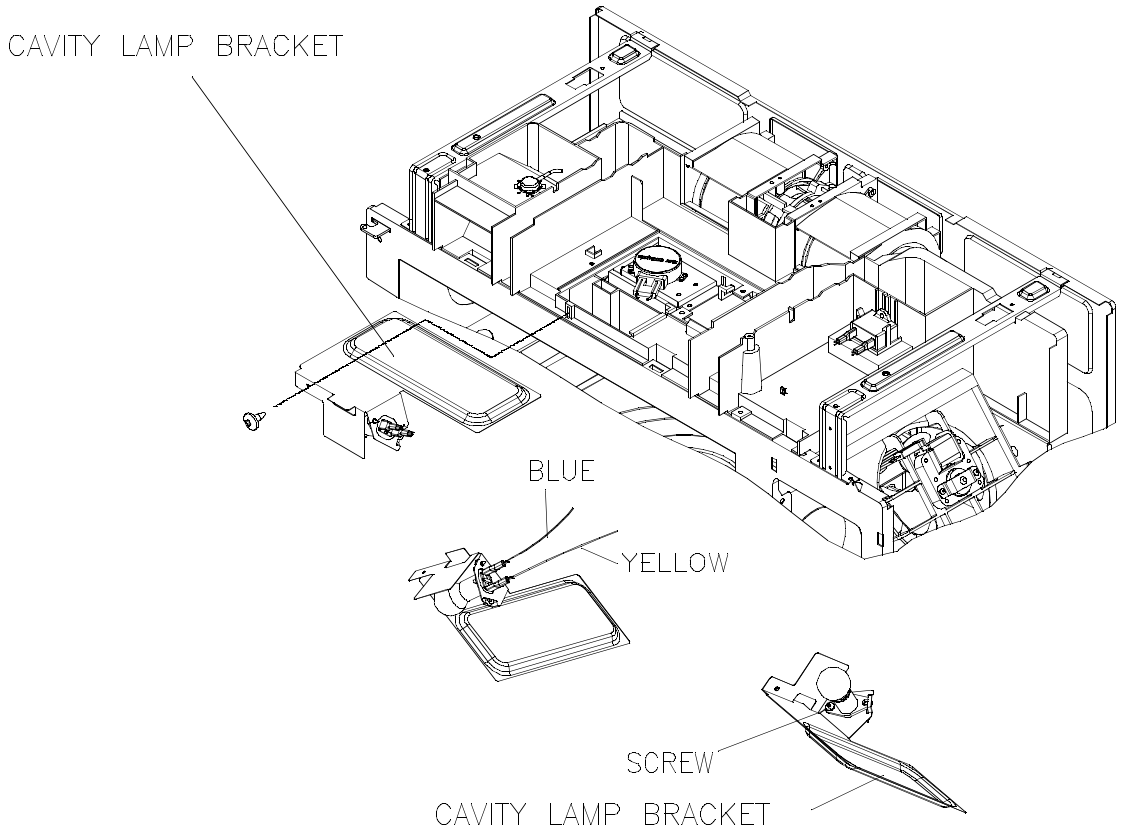


FIG. 4

5. REPLACING THE LINE FUSE

WARNING :

Personal Injury Hazard
Disconnect from the electrical supply before srvicing the unit. Failure to do so could result shock or other personal injury.

1. Remove 2 screws from the vent grille and remove the grille (See FIG. 1).
2. Remove the screw from the front of the microwave oven for wire protector and remove the wire protector(see Fig. 1).
3. Remove the screw from the top center tab of the control panel (See FIG. 2).
4. From the top and back of the control panel, pull out the Fuse Holder.
5. Without touching the metal ends, remove the defective line fuse from its holder and install a new one in its place.
6. Mount the control panel to the oven and secure it with its mounting screw.
7. Mount the vent grille to the microwave oven and check out the operation.

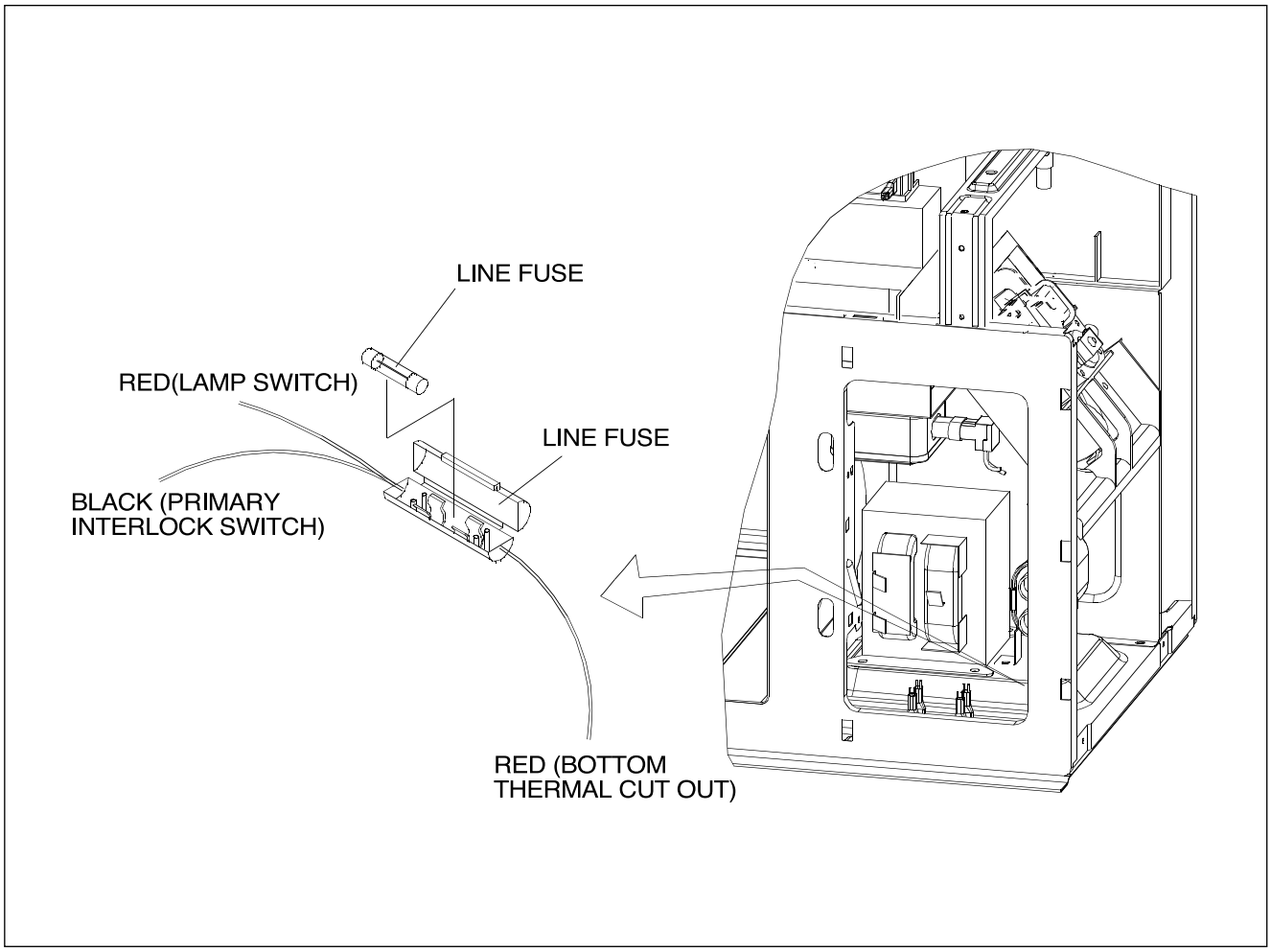


FIG. 5

6. REPLACING THE VENT MOTOR CAPACITOR

WARNING :

Persona Injury Hazard
Disconnect from the electrical supply before servicing the unit. Failure to do so could result in electrical shock or other personal injury.

CAUTION :

Persona Injury Hazard
Because of the weight and size of the microwave oven, two people are required to safely move and install it. Failure to do so could result in personal injury.

1. Remove the vent grille from the microwave oven (See Cabinet Removal).
2. Remove the screw from the top center tab of the control panel.(See FIG. 2)
3. Remove the screw from the top center tab of wire protector.
4. Disconnect the two wire connectors from the vent motor capacitor terminals.
5. Remove the screw for vent motor capacitor and remove it, then install a new capacitor in its place.
6. Reconnect the wires to the new vent motor capacitor terminals, as shown in the FIG. 6.
7. Reinstall the control panel and the vent grille on the microwave oven.

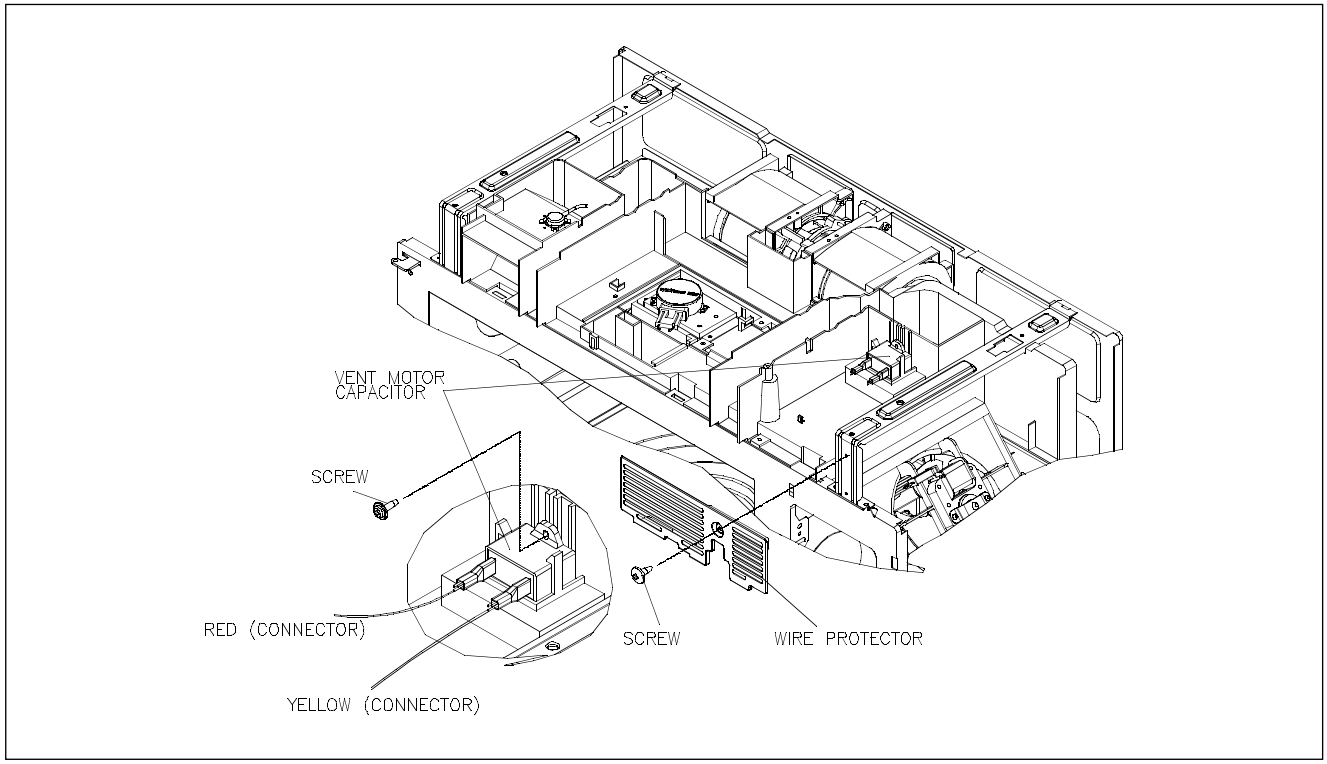


FIG. 6

7. REPLACING/ADJUSTING - INTERLOCK SWITCHES

WARNING :

Personal Injury Hazard
Disconnect from the electrical supply before servicing the unit. Failure to do so coud result in electrical shock or other personal injury.

-REPLACING A SWITCH

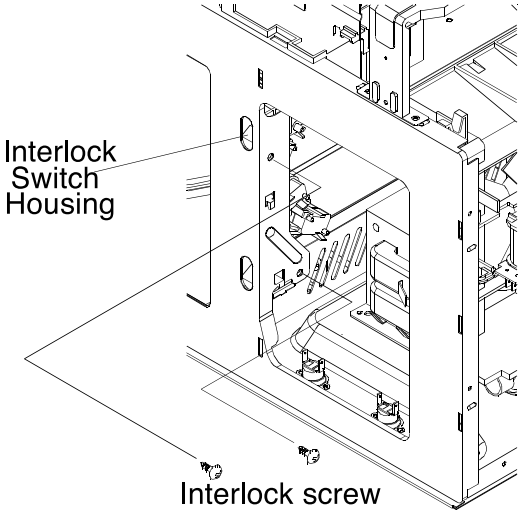


FIG. 7

1. Disconnect the electrical supply to the microwave oven.
2. Remove the vent grille and the cabinet from the microwave oven (See cabinet removal on FIG. 1).
3. Remove the screw from the center of wire protector.
4. Remove the screw from the top center tab of the control panel (See FIG. 2).
5. From the top and back of the control panel, lift the top locking tab and Pull the top of the panel out slightly, then lift the bottom tabs of the panel out of the slots and pull it forward. Set the panel inside the oven cavity while you work.
   Refer to FIG. 7 for the following steps:
6. Remove the two mounting screws from the interlock switch assembly, and position the assembly so you can easily access the switches and wiring.
7. Refer to REMOVE SWITCH in FIG. 7-1 for the interlock switches the interlock switch housing assembly, and remove the switch from the housing as shown.
8. One at a time, pull the wire connectors off the defective switch, and reconnect them to the same terminals on the replacement switch (See FIG. 7-1).
9. Sanp the new switch into place on the switch housing.
10. Mount the interlock switch assembly to the chassis flange with two screws (See FIG. 7).

-MAKING ADJUSTMENTS

Refer to FIG. 7-1 for the following steps:

1. If necessary, adjust the interlock switch housing so that the switches operate properly.

WARNING :

The interlock Monitor Switch provides an added safety check on the Primary and Secondary Interlock Switches. If the Primary and Secondary Interlock Switches allow the oven to operate with the door open, the Monitor Interlock Switch will blow the line fuse.

NOTE :

Interlock switch replacement
Whenever safty interlock switches are replaced:
Refer to the following diagram.
Check the connection of monitor switch after replacement.
Perform the electrical continuity check of interlock switches and microwave emission test mentioned in this manual.

2. Mount the control panel to the oven with the screw you removed earlier.
3. Mount the vent grille to the microwave oven and check out the operation of the switches.

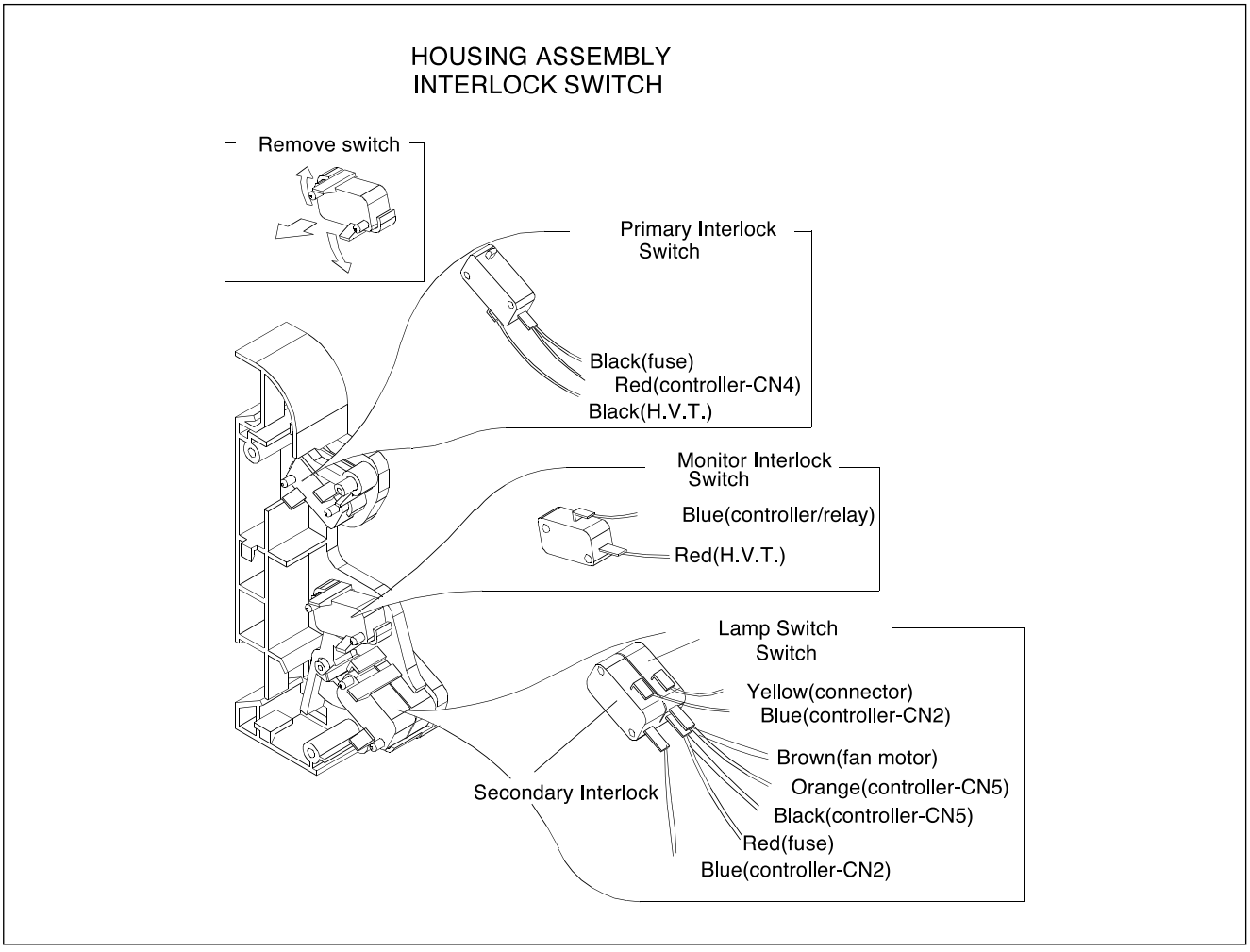


FIG. 7-1

8. REPLACING THE THERMOSTAT (BOTTOM/VENT)

WARNING :

Personal Injury Hazard
Disconnect from the electrical supply before servicing the unit. Failure to do so could result in electrical shock or other personal injury.

1. Disconnect the electric supply to the microwave oven.
2. Remove the vent grille and the cabinet from the microwave oven (See cabinet removal on FIG. 1).
3. Remove the wire protector(see Fig. 4).
4. Remove the screw from the top center tab of the control panel. (See FIG. 2).
5. From the top and back of the control panel, lift the top locking tab and pull the top of the panel out slightly, then lift bottom tabs of the panel out of the slots and pull it forward. Set the panel inside the oven cavity while you work.

Refer to FIG. 8 and the inset for the following steps:

6. Remove the mounting screw from the bottom thermostat and lift the bottom flange out at slot in the chassis (See FIG. 8)
7. Unplug the two wire connectors from the bottom thermostat.
8. Connect the two wires to the new bottom thermostat.
9. Insert the bottom tab of the bottom thermostat into the chassis slot, and secure the thermostat with its mounting screw.
10. Mount the Control panel to the oven and screw it with its mounting screw.
11. Mount the vent grille to the microwave oven and check out the operation.

* Vent thermostat is same as bottom thermostat method. (See FIG. 8-2)

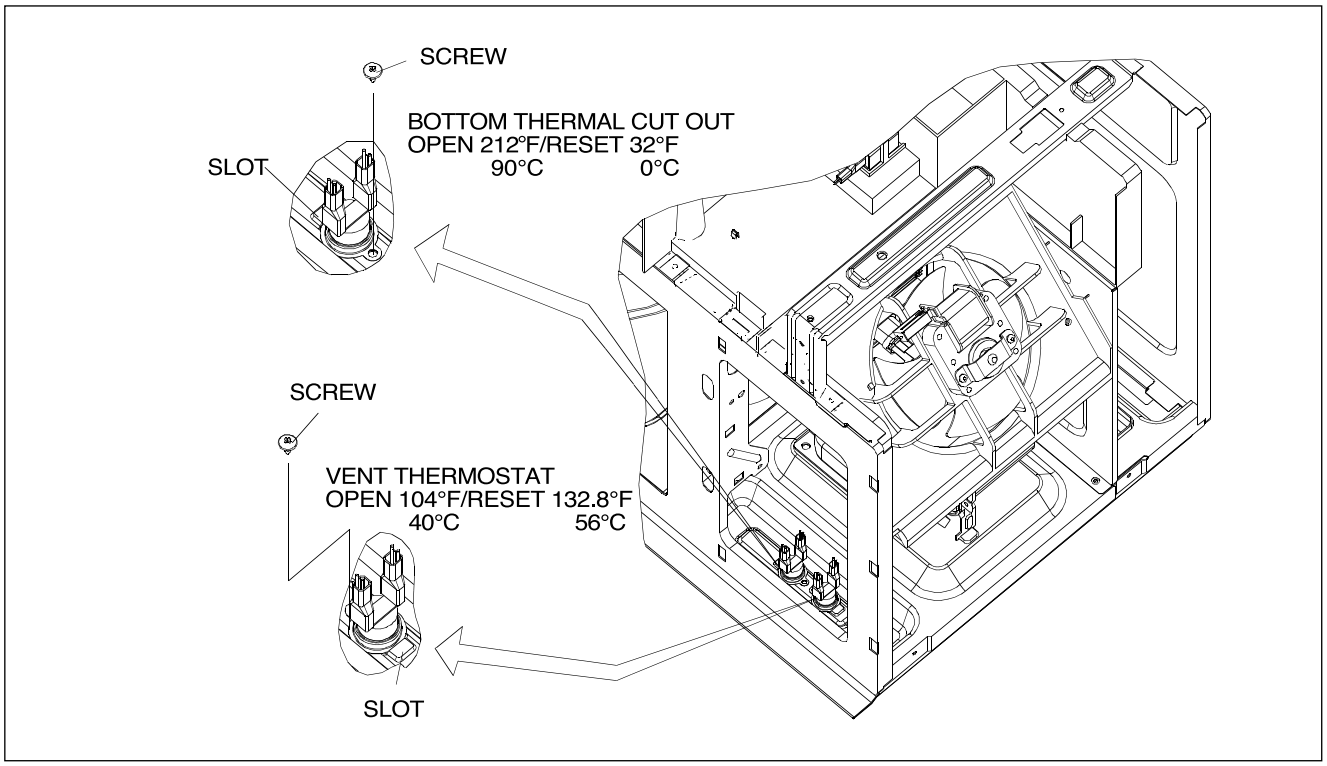


FIG. 8

9. REPLACING THE TRAY MOTOR

WARNING :

Personal Injury Hazard
Disconnect from the electrical supply before servicing the unit. Failure to do so could result in electrical shock or other personal injury.

CAUTION :

Personal Injury Hazard
Because of the weight and size of the microwave oven, two people are required to safely move and install it. Failure to do so could result in personal injury.

1. Remove 4 screws from the base plate and remove it.

Refer to the FIG. 9 for the following steps:

2. Pull the connectors off the tray motor terminal.
3. Remove the screws from the tray motor and remove the motor.
4. Install the coupler onto the new tray motor shaft.
5. Mount the new motor to the oven with its the screws.
6. Connect the wires to the tray motor terminal.
7. Reinstall the base plate in the oven.
8. Secure its 4 screws.

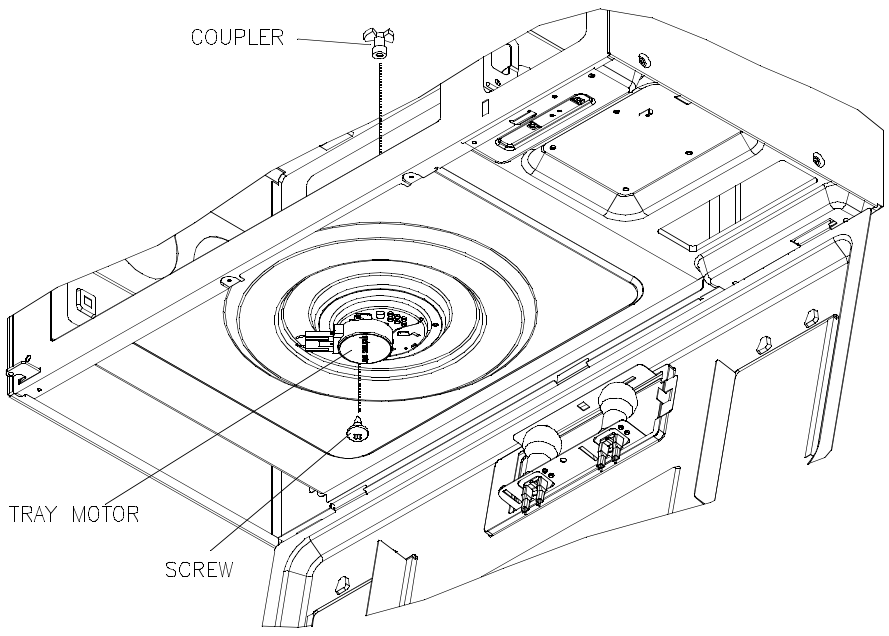


FIG. 9

10. REPLACING A COOKTOP LIGHT SOCKET

WARNING :

Personal Injury Hazard
Disconnect from the electrical supply before servicing the unit. Failure to do so could result in electrical shock or other personal injury.

CAUTION :

Personal Injury Hazard
Because of the weight and size of the microwave oven, two people are required to safely move and install it. Failure to do so could result in personal injury.

1. Pull the connectors off the cook-top light socket terminals set the base plate aside.
2. Remove the screw for the cook-top light socket and remove it.
3. Mount the new light socket into the holder.
4. Reattatch the connectors with the orange and brown wires over the light socket terminals.
5. Mount the base plate to the microwave oven.

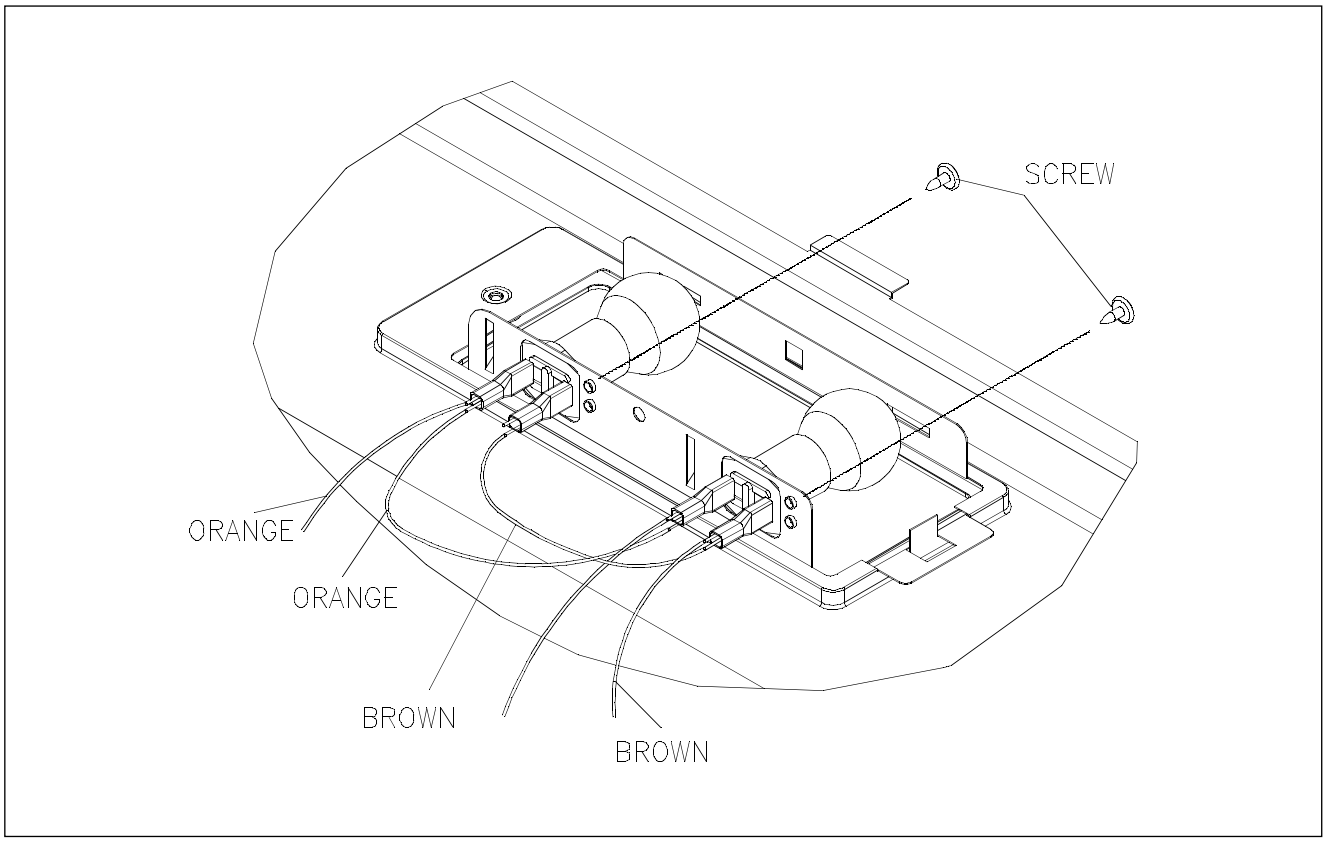


FIG. 10

11. REPLACING THE DOOR ASSEMBLY

WARNING :

Personal Injury Hazard
Disconnect from the electrical supply before servicing the unit. Failure to do so could result in electrical shock or other personal injury.

CAUTION :

Personal Injury Hazard
Because of the weight and size of the microwave oven, two people are required to safely move and install it. Failure to do so could result in personal injury.

Refer to FIG. 11 for the following steps:
1. Remove the Grille.
2. Open the door and lift the door.

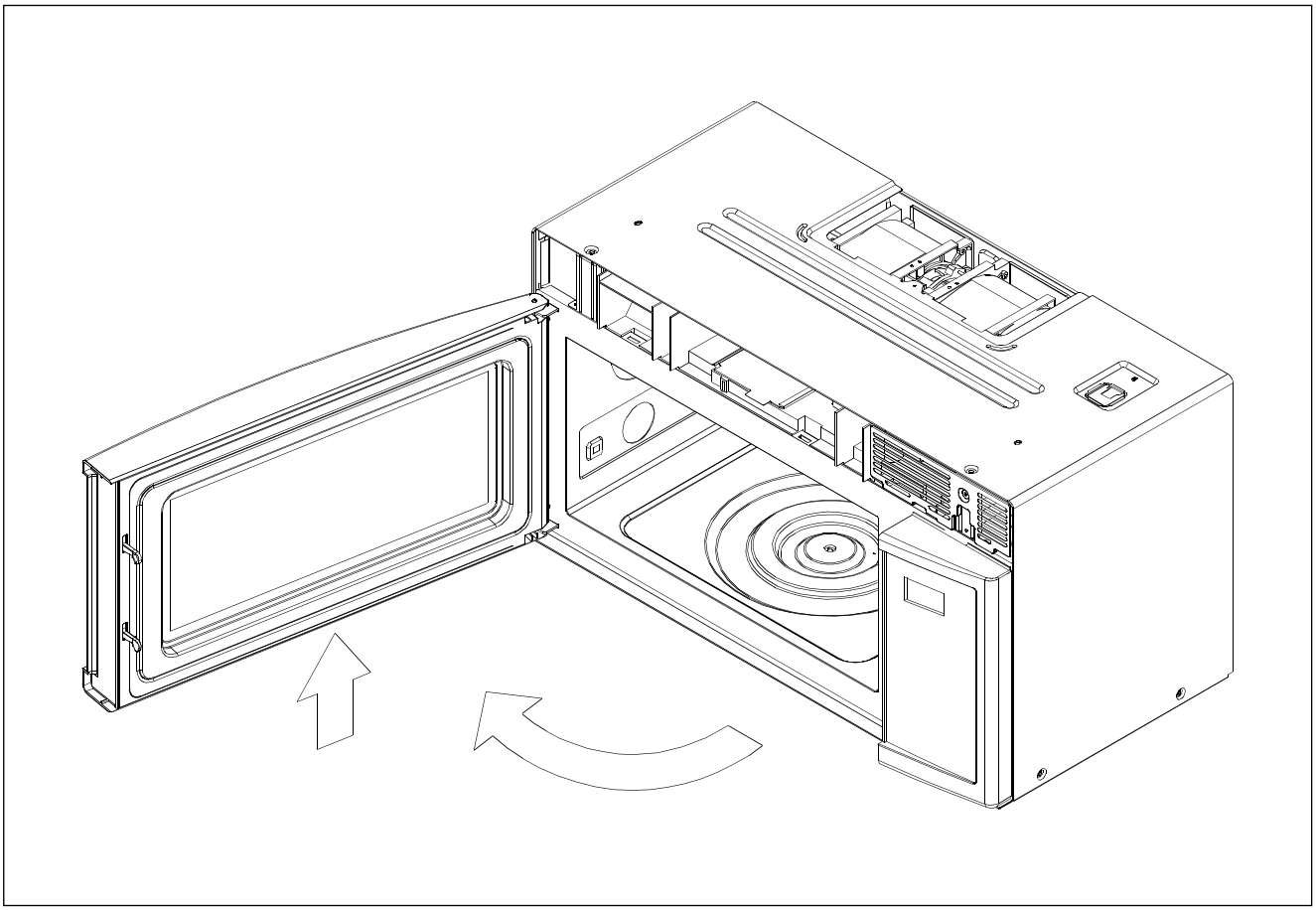


FIG. 11

12. REPLACING THE GASKET

WARNING :

Personal Injury Hazard
Disconnect from the electrical supply before servicing the unit. Failure to do so could result in electrical shock or other personal injury.

Refer to FIG. 12 for the following steps:

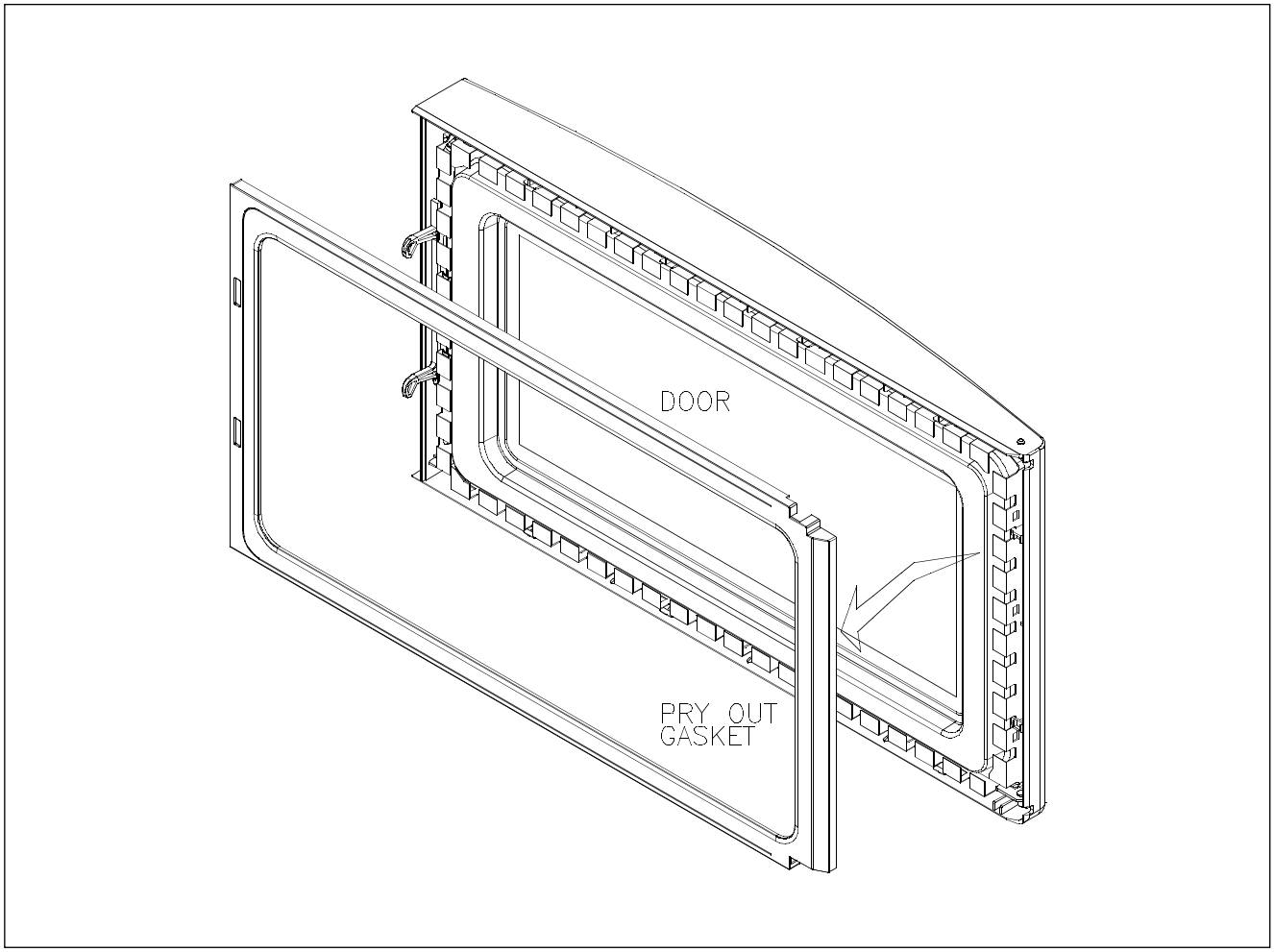


FIG. 12

1. Open the oven door.
2. Pry out the gasket along the edges of the door with a putty knife.
3. Install the new gasket so that it fits tightly into place inside the door.

13. REPLACING

-THE CAVITY THERMOSTAT

WARNING :

Personal Injury Hazard
Disconnect from the electrical supply before servicing the unit. Failure to do so could result in electrical shock or other personal injury.
Discharge the high voltage capacitor before working inside the oven. Failure to do so could result in electrical shock.

CAUTION :

Personal Injury Hazard
Because of the weight and size of the microwave oven, two people are required to safely move and install it. Failure to do so could result personal injury.

1. Remove the microwave oven from the microwave oven location.
2. Remove the vent grille and cabinet from the microwave oven. (See the cabinet removal)
3. Remove the 2 screws for supporter from the microwave oven.
4. Remove the power cord (see the replacing the powercord, Fig. 16)
5. Remove 4 screws for the vent motor and air guide top.
6. Remove the vent motor and lift the air guide top. (See FIG. 13-1)
7. Unplug and replace the two wire connectors from the cavity thermostat. (See FIG. 13-2)
8. Install the new cavity thermostat and reinstall the air guide top, vent motor, cabinet and vent grille on the microwave oven.

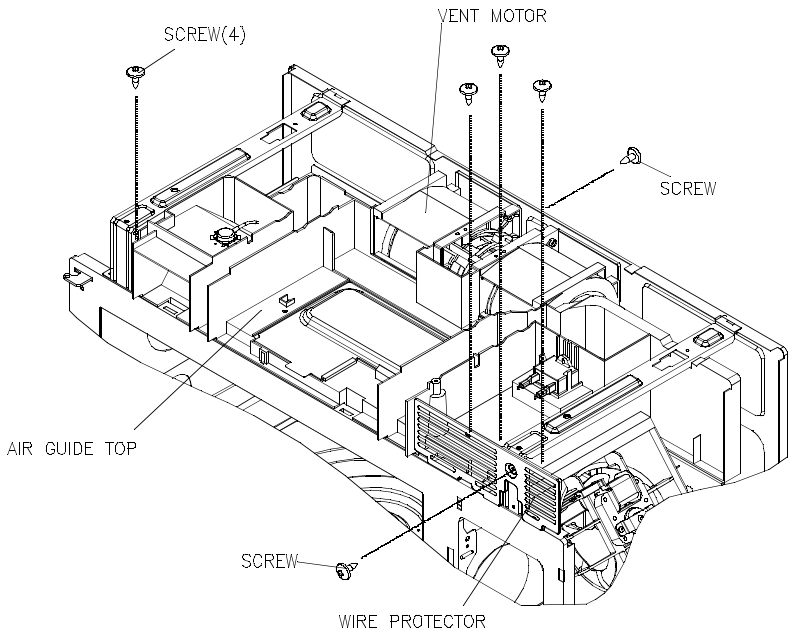


FIG. 13

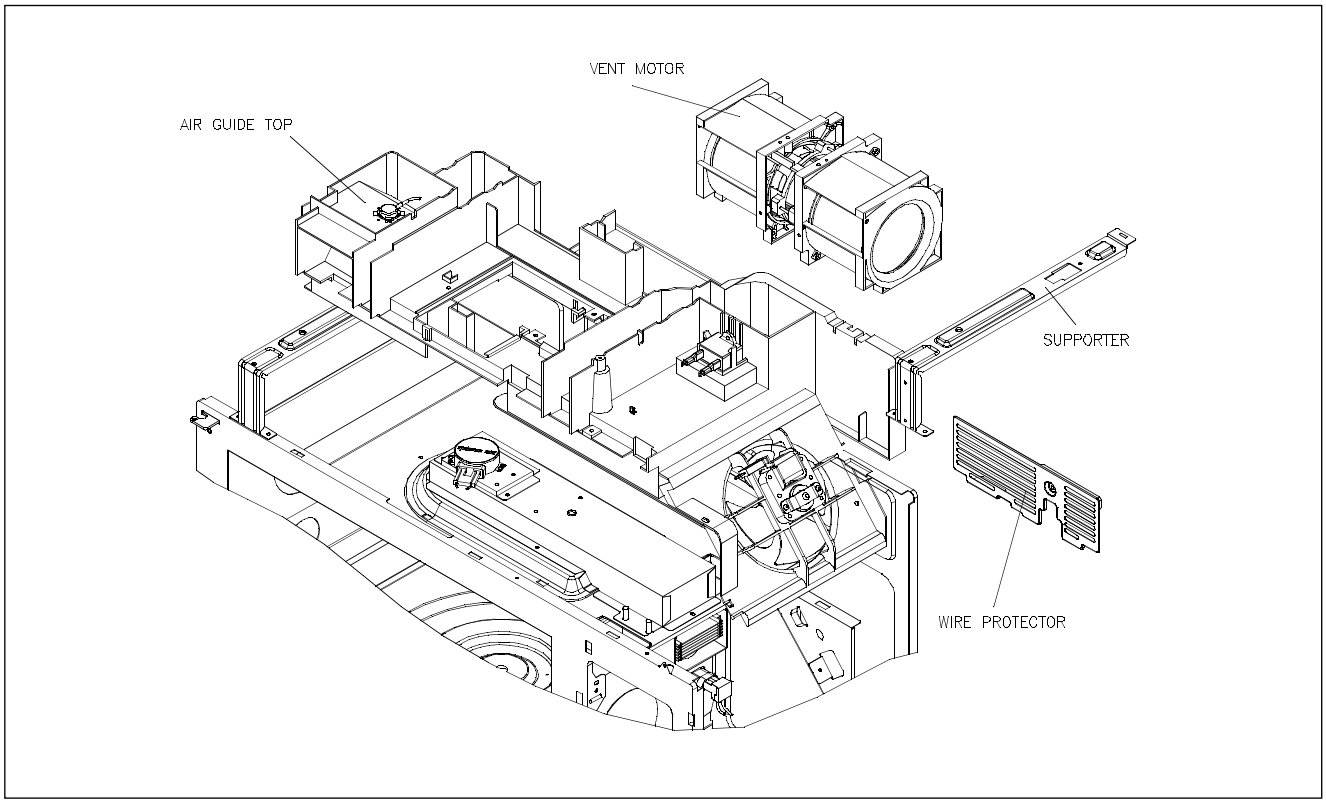


FIG. 13-1

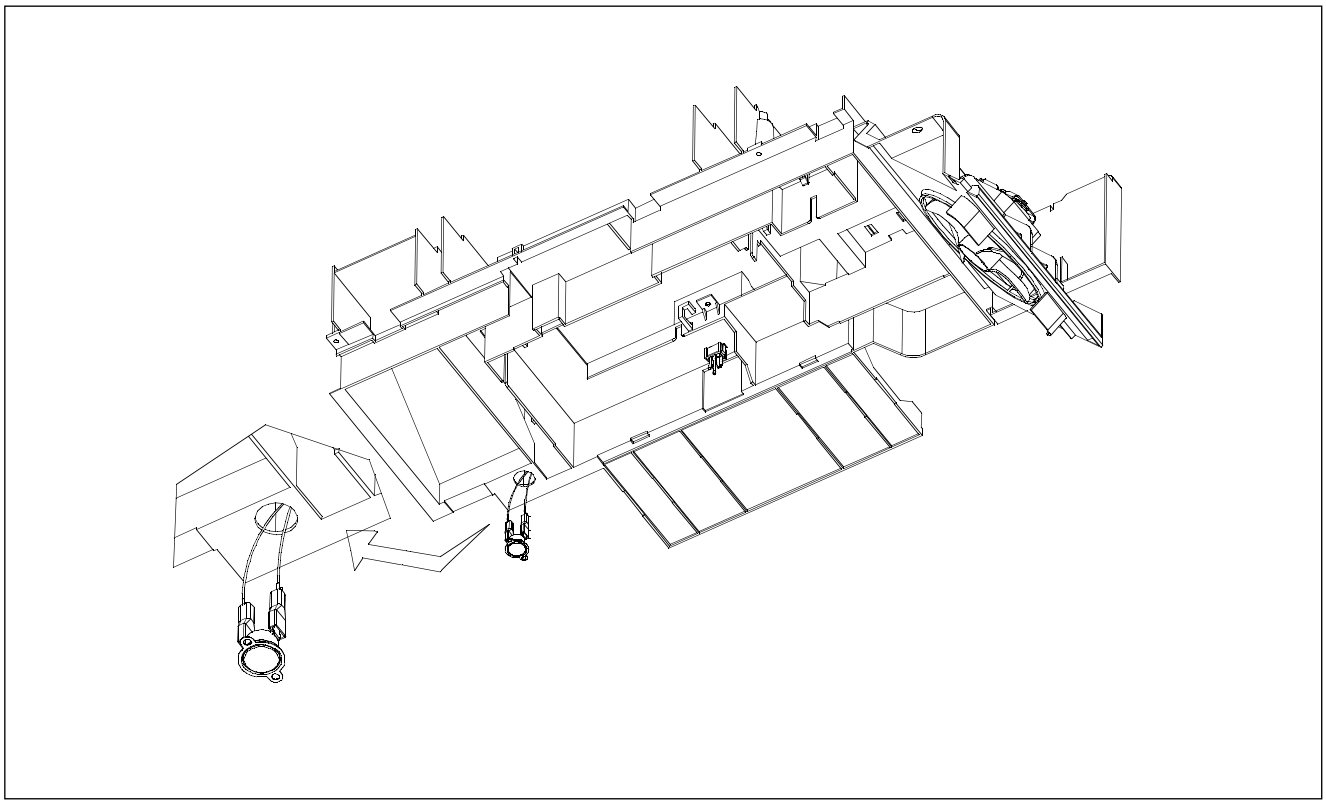


FIG. 13-2

14. REPLACING THE VENTILATION MOTOR

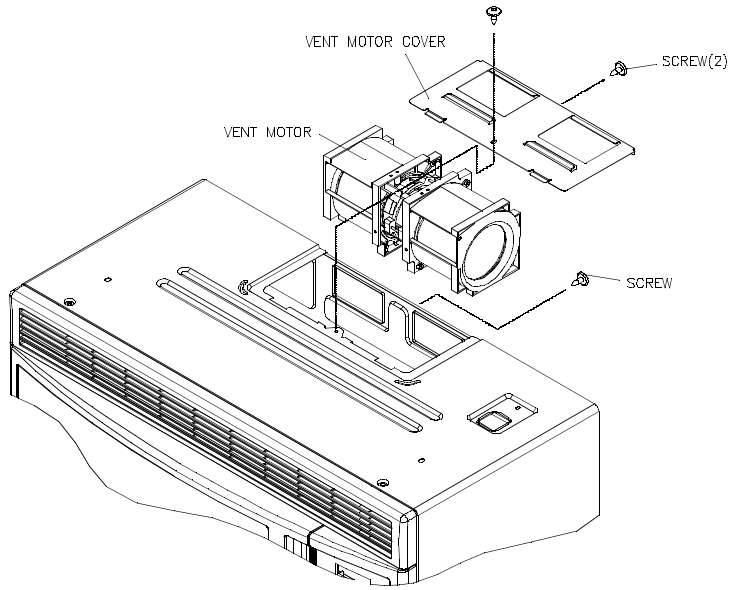


FIG. 14

CAUTION :

Personal Injury Hazard
Because of the weight and size of the microwave oven, two people are required to safely move and install it. Failure to do so could result in personal injury.

1. Remove the microwave oven from the microwave oven location.
2. Remove 2 screws for the vent motor cover and remove it. (See cabinet removal).
3. Remove the screws for the vent motor and lift the vent motor. (See FIG. 14).
4. Unplug the wire connectors for vent motor.
5. Install the new vent motor and secure the vent motor.
6. Connect the wire connector and secure the vent motor.
7. Mount the control panel to the oven and secure it with its mounting screw.
8. Refer to Cabinet Installation and reinstall the base plate and the vent grille on the micrewave oven.

15. REPLACING THE FAN MOTOR

WARNING :

Personal Injury Hazard
Disconnect from the electrical supply before servicing the unit. Failure to do so could result in electrical shock or other personal injury.

CAUTION :

Personal Injury Hazard
Because of the weight and size of the microwave oven, two people are required to safely move and install it. Failure to do so could result in personal injury.

1. Remove the microwave oven from its mounting location.
2. Remove the vent grille, the wire protector and the cabinet from the microwave oven (See Cabinet Removal).
3. Remove the screw from the top center tab of the control panel.

Refer to the inset and perform the following steps:

4. Unplug the fan motor wire connectors from the motor terminals, and remove the fan motor assembly.
5. Pull the fan blade and compression washer off the shaft of the defective fan motor.
6. Remove the two motor mounting screws from the fan motor and remove it.
7. Mount the new fan motor to the fan motor housing with the two mounting screws.
8. Slide the fan blade.
9. Connect the fan motor wires to the fan motor terminals.

– Reassembly

1. Connect the wiring to the control panel circuit board, and then mount the control panel to the oven with its mounting screw.
2. Refer to Cabinet Installation, and reinstall the cabinet and the vent grille on the microwave oven with its mounting screw.
3. Reinstall the microwave oven in its mounting location.

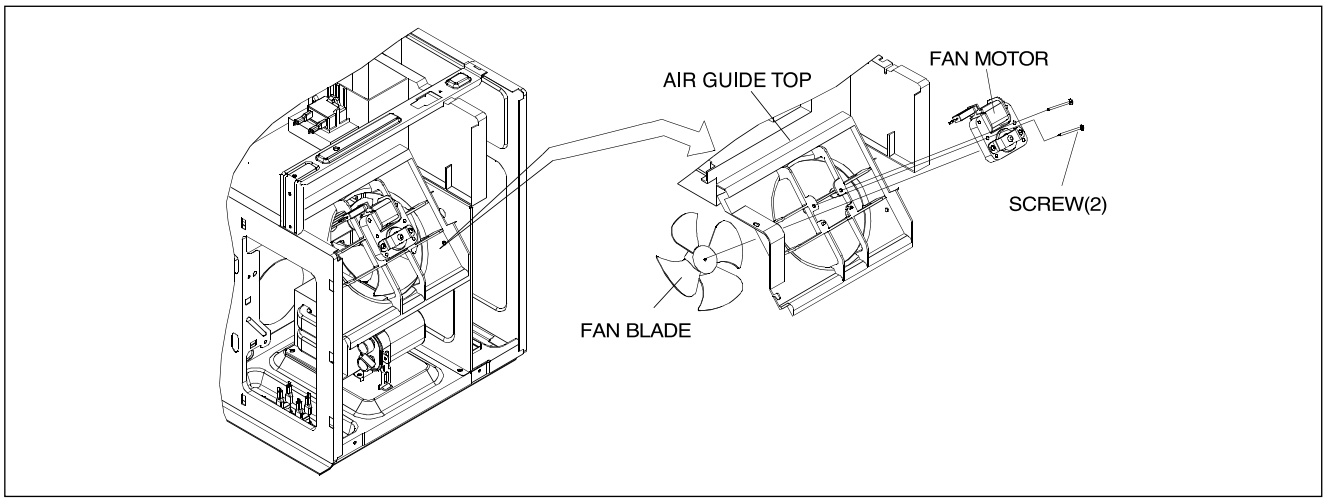


FIG. 15

16. REPLACING THE POWER CORD

WARNING :

Personal Injury Hazard
Disconnect from the electrical supply before servicing the unit. Failure to do so could result in electrical shock or other personal injury.

CAUTION :

Personal Injury Heazard
Because of the weight and size of the microwave oven, two people are required to safely move and install it. Failure to do so could result in personal injury.

1. Remove the microwave oven from its mounting location.
2. Remove the vent grille, the wire protector and the cabinet from the microwave oven (See “Cabinet Removal).

Refer to FIG. 16 and the inset for the following steps:

3. Unplug the black and white power cord leads.

NOTE :

Disconnect the black lead by pressing in on the locking arm of the connector and pulling it loose.

4. Remove the ground screw from the green power cord lead.
5. Remove the old power cord.
6. Raise the cover just enough to slide the new power cord strain relief block into the chassis slot.
7. Connect the power cord lead to the wiring harness connector so the sections lock together.
8. Route the green wire under the cover, and mount the eyelet to the chassis with the screw you removed earlier.
9. Refer to “Cabinet Installation” and reinstall the cabinet and the vent grille on the microwave oven.
10. Reinstall the microwave oven in its mounting location.

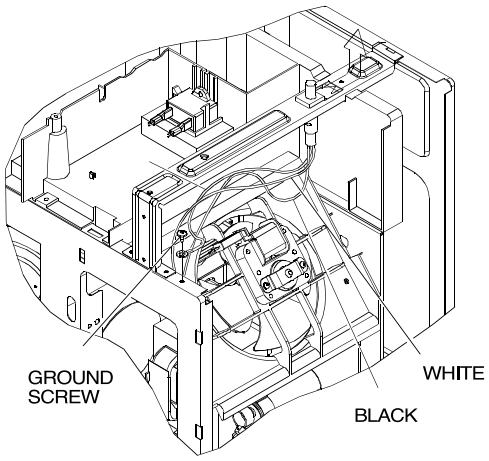


FIG. 16

17. REPLACING THE HIGH-VOLTAGE TRANSFORMER

WARNING :

Personal Injury Hazard
Disconect from the electrical supply before servicing the unit. Failure to do so could result in electrical shock or other personal injury.

CAUTION :

Personal Injury Hazard
Because of the weight and and size of the microwave oven, two people are required to safely move and install it. Failure to do so could result in personal injury.

1. Remove the vent grille, the wire protector and the base plate from the microwave oven (See FIG. 1,2).
2. Remove the control panel so that you can access the high-voltage section in the microwave oven(See FIG.1).

NOTE :

Personal Injury Hazard
Disconnect from the power supply, before servicing. Discharge the capacitor using a 20,000 W discharge resistor, or an insulated plastic-handle screwdriver to short across the capacitor terminals.

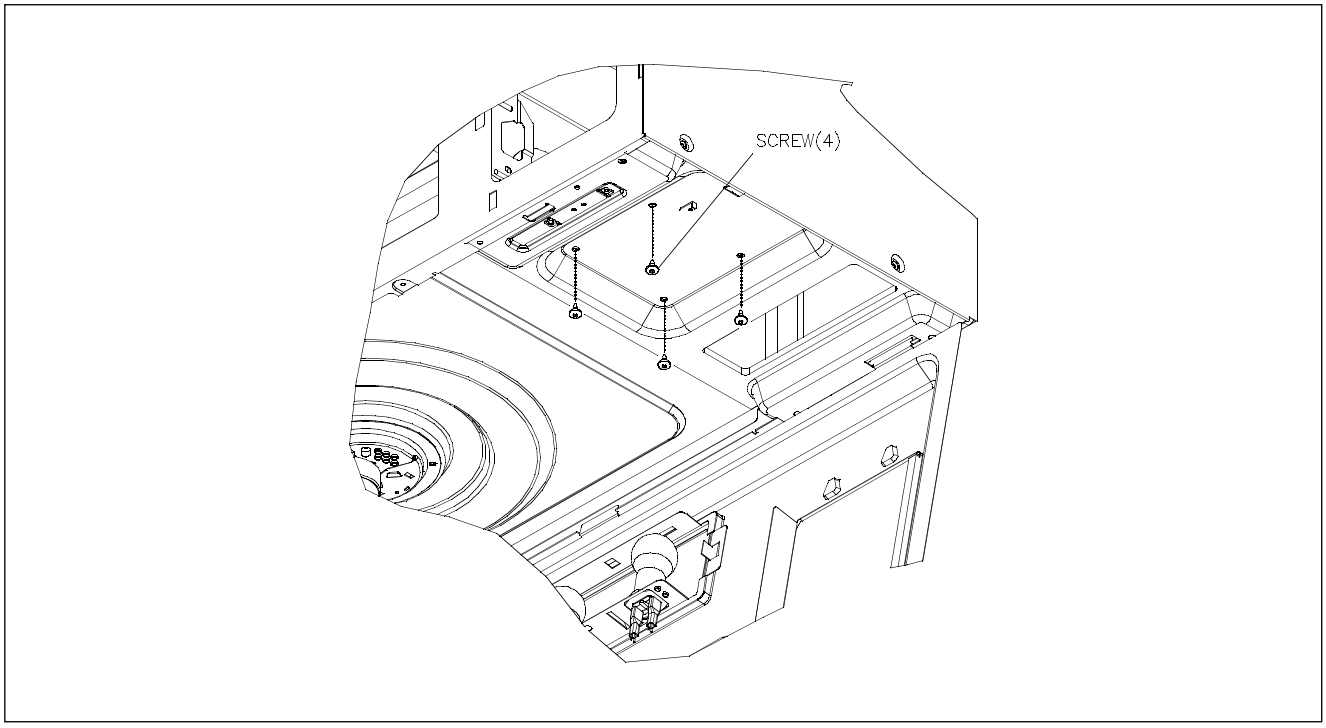


FIG. 17

3. Discharge the high-voltage capacitor.
4. Remove 4 screws from the H.V. Transformer and save the screws.

Refer to FIG. 17-1 for the following steps:

5. Unplug the five high-voltage transformer wire connectors and remove high voltage transformer.
6. Mount the new high-voltage transformer to the plate with 4 mounting screws you removed earlier.
7. Connect 5 wire connectors going to the high-voltage capacitor, the high-voltage transformer, and the magentron as shown in FIG.17-1.

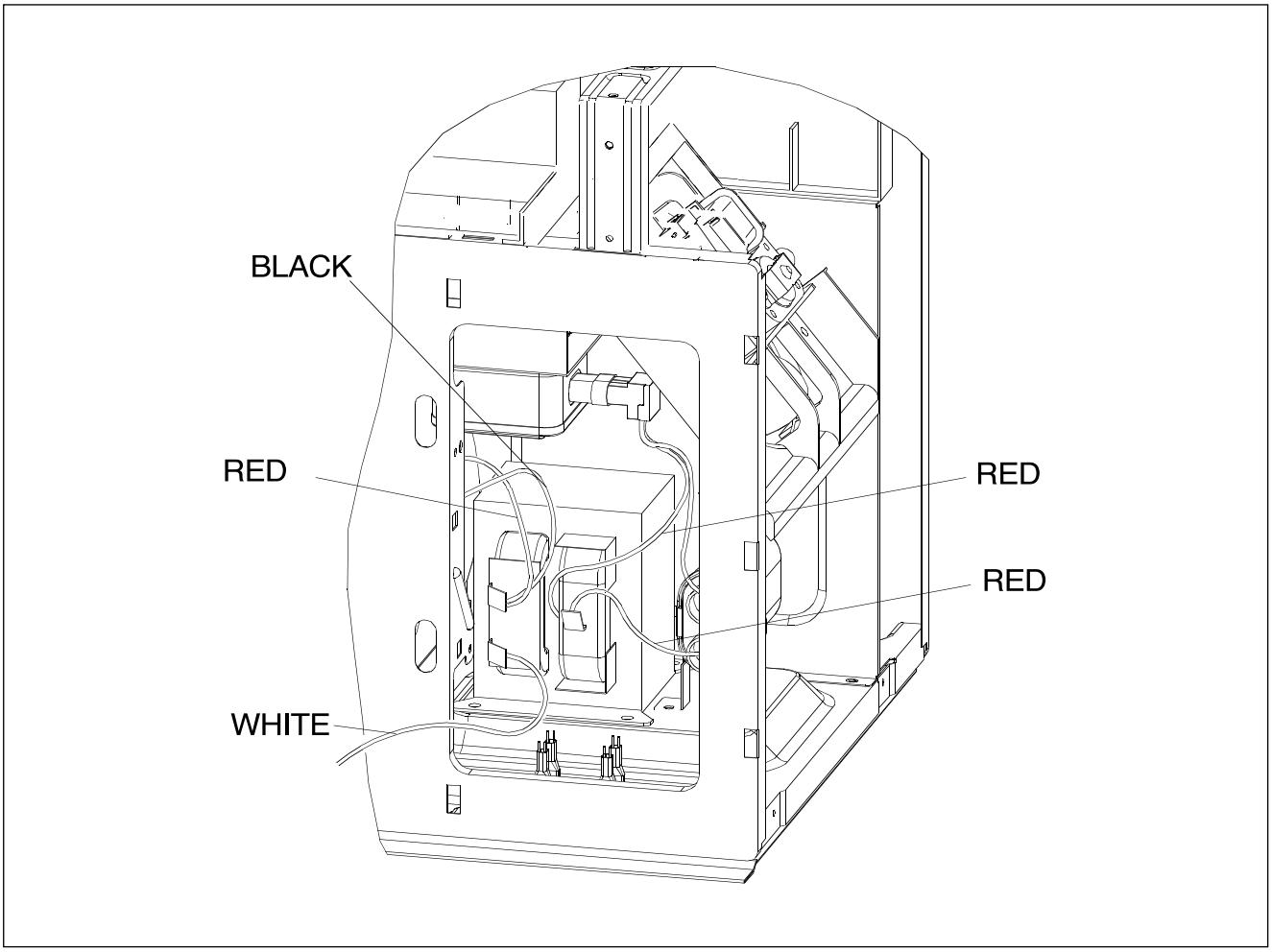


FIG. 17-1

18. REPLACING THE HIGH VOLTAGE RECTIFIER

WARNING :

Personal Injury Hazard
Disconnect from the electrical supply before servicing the unit. Failure to do so could result in electrical shock or other personal injury.

CAUTION :

Personal Injury Hazard
Because of the weight and size of the microwave oven, two people are required to safely move and install it. Failure to do so could result in personal injury.

1. Remove the vent grille, the wire protector and the control panel from the microwave oven (See FIG.1, FIG.2).
2. You can access the high-voltage section in the microwave oven.

WARNING :

Personal Injury Hazard
Disconnect from the power supply, before servicing. Discharge the capacitor using a 20,000 W discharge resistor, or an insulated plastic-handle screwdriver to short across the capacitor terminals.

3. Discharge the high-voltage capacitor.
4. Unplug one end of the high-voltage rectifier from the high-voltage capacitor terminal.
5. Remove a screw from the end of the high-voltage rectifier, and remove the high voltage rectifier.
6. Mount the eyelet on the end of the high-voltage rectifier lead to the bracket with its mounting screw.

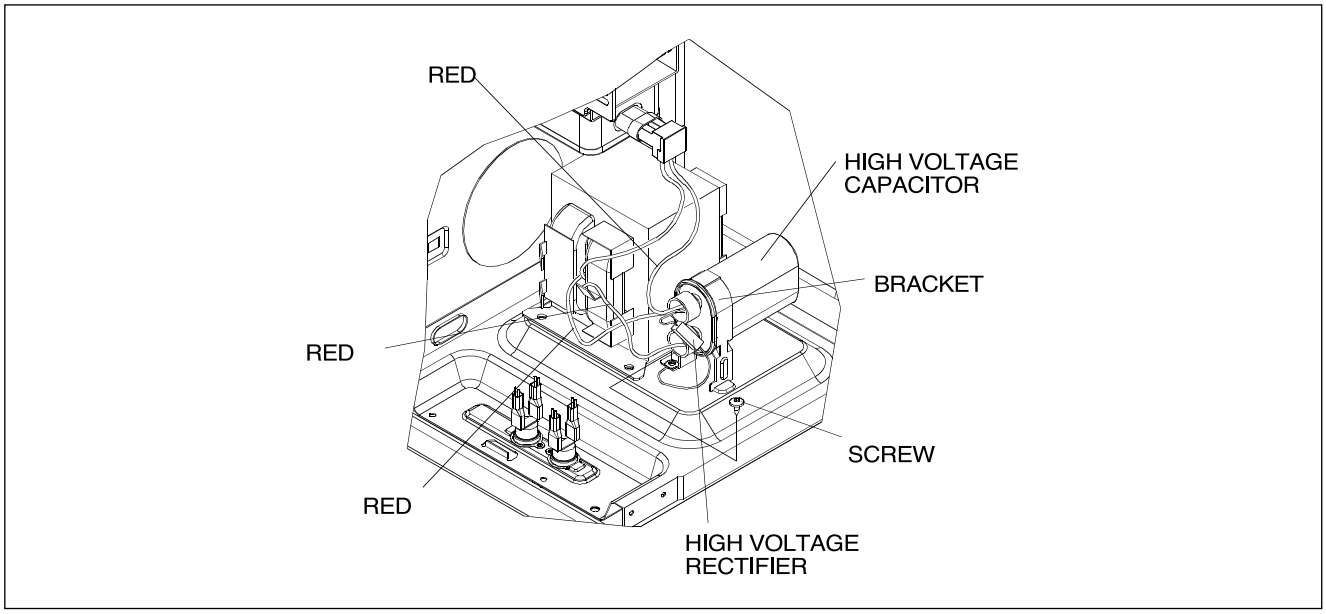


FIG. 18

19. REPLACING THE HIGH VOLTAGE CAPACITOR

WARNING :

Personal Injury Hazard
Disconnect from the electrical supply before servicing the unit. Failure to do so could result in electrical shock or other personal injury.

CAUTION :

Personal Injury Hazard
Because of the weight and size of the microwave oven, two people are required to safely move and install it. Failure to do so could result in personal injury.

1. Remove the vent grille(See FIG.1, FIG2).
2. Remove the wire protector.
3. Remove the control panel so that you can access the high-voltage section in the microwave oven. (See FIG. 1)

WARNING :

Personal lnjury Hazard
Disconnect from the power supply, before servicing. Discharge the capacitor using a 20,000 W discharge resistor, or an insulated plastic-handle screwdriver to short across the capacitor terminals.

4. Discharge the high-voltage capacitor.
5. Unplug the wire connector going to high voltage transformer and one end of high voltage rectifier.
6. Remove the capacitor mounting strap screw, the remove the old capacitor.

7. Position the new high-voltage capacitor with the round blister (between the leads). Make sure that the flange on the strap is against the front end of the capacitor, and tighten the screw just enough to hold the capacitor in place.
8. Connect the end of the high-voltage rectifier and red wire coming from the high voltage transformer to the indicated capacitor terminal.
9. Connect the remaining red lead coming from the magnetron to the indicated capacitor terminal.

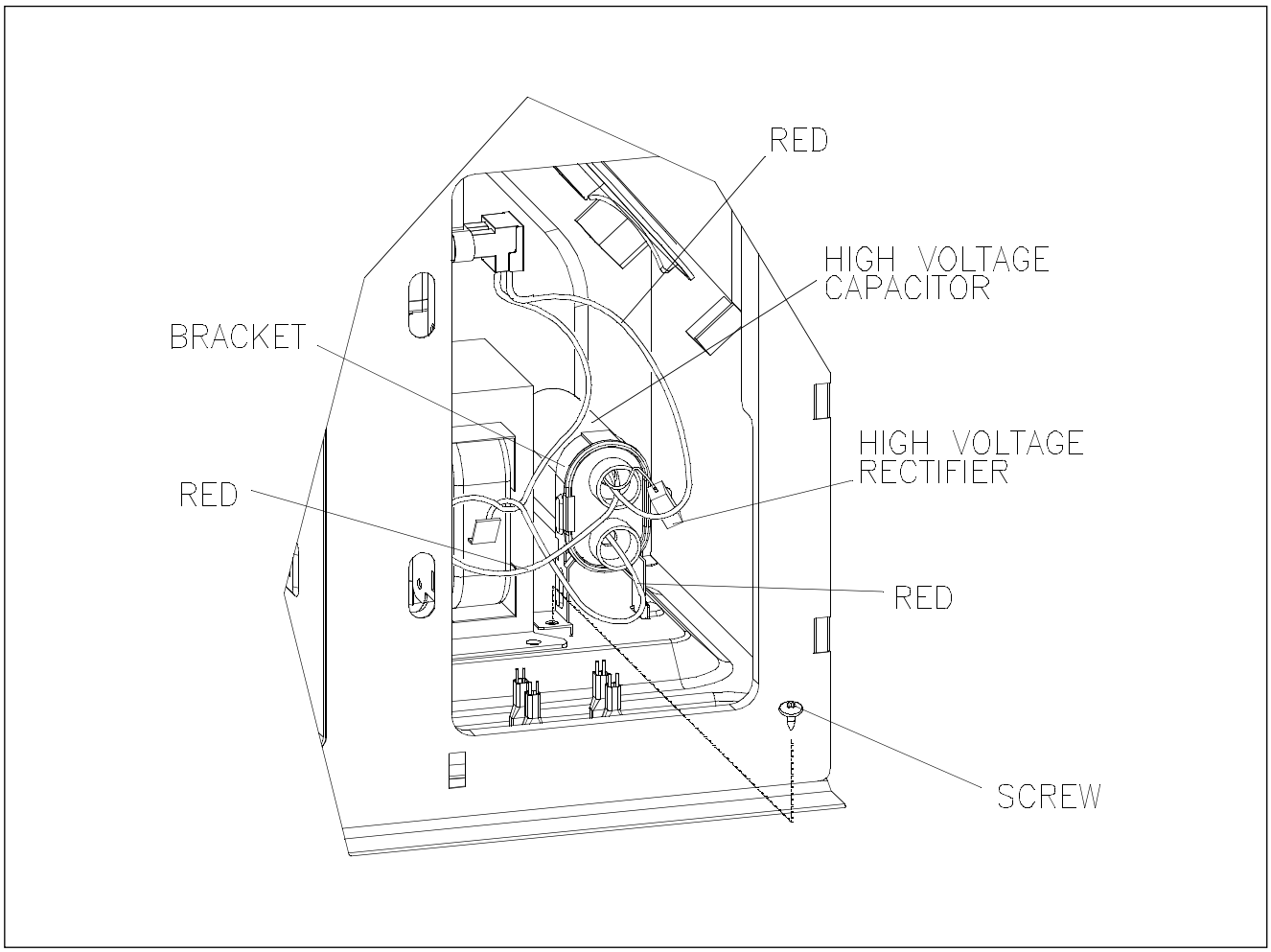


FIG. 19

20. REPLACING THE MAGNETRON

WARNING :

Personal Injury Hazard
Disconnect from the electrical supply before servicing the unit. Failure to do so could result in electrical shock or other personal injury.

CAUTION :

Personal Injury Hazard
Because of the weight and size of the microwave oven, two people are required to safely move and install it. Failure to do so could result in personal injury.

1. Remove the microwave oven from its mounting location.
2. Remove the vent grille, the wire protector and the cabinet from the microwave oven (See “Cabinet Removal).
3. Remove the control panel so that you can access the high-voltage section in the microwave oven.

WARNING :

Personal Injury Hazard
Disconnect from the power supply, before servicing. Discharge the capacitor using a 20,000 W discharge resistor, or an insulated plastic-handle screwdriver to short across the capacitor terminals.

4. Remove the supporter and powercord(See Fig.13).
5. Remove the air guide top.
6. Discharge the high-voltage capacitor.
7. Unplug the red wire connectors from the high voltage transformer.
8. Remove the four mounting hex nuts from the magnetron. Support the magnetron with one hand while you remove the screws with the other so that the magnetron does not fall as you remove it.

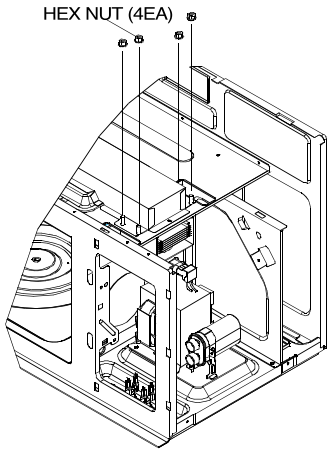


FIG. 20

9. Mount the magnetron cover lamp to the new magnetron with its 1 mounting screw.
10. Position the new magnetron so that the magnetron the cover lamp the front of the oven, and mount the magnetron to the top of the chassis with its four mounting hex unts. Make sure that you tighten the nuts securely.
11. Connect the red high voltage leads to the magnetron terminals.
12. Refer to “Cabinet Installation” and reinstall the Air guide top, supporter, powercord, wire protector, the cabinet, control panel and the vent grille on the microwave.
13. Reinstall the micowave oven in its mounting location.

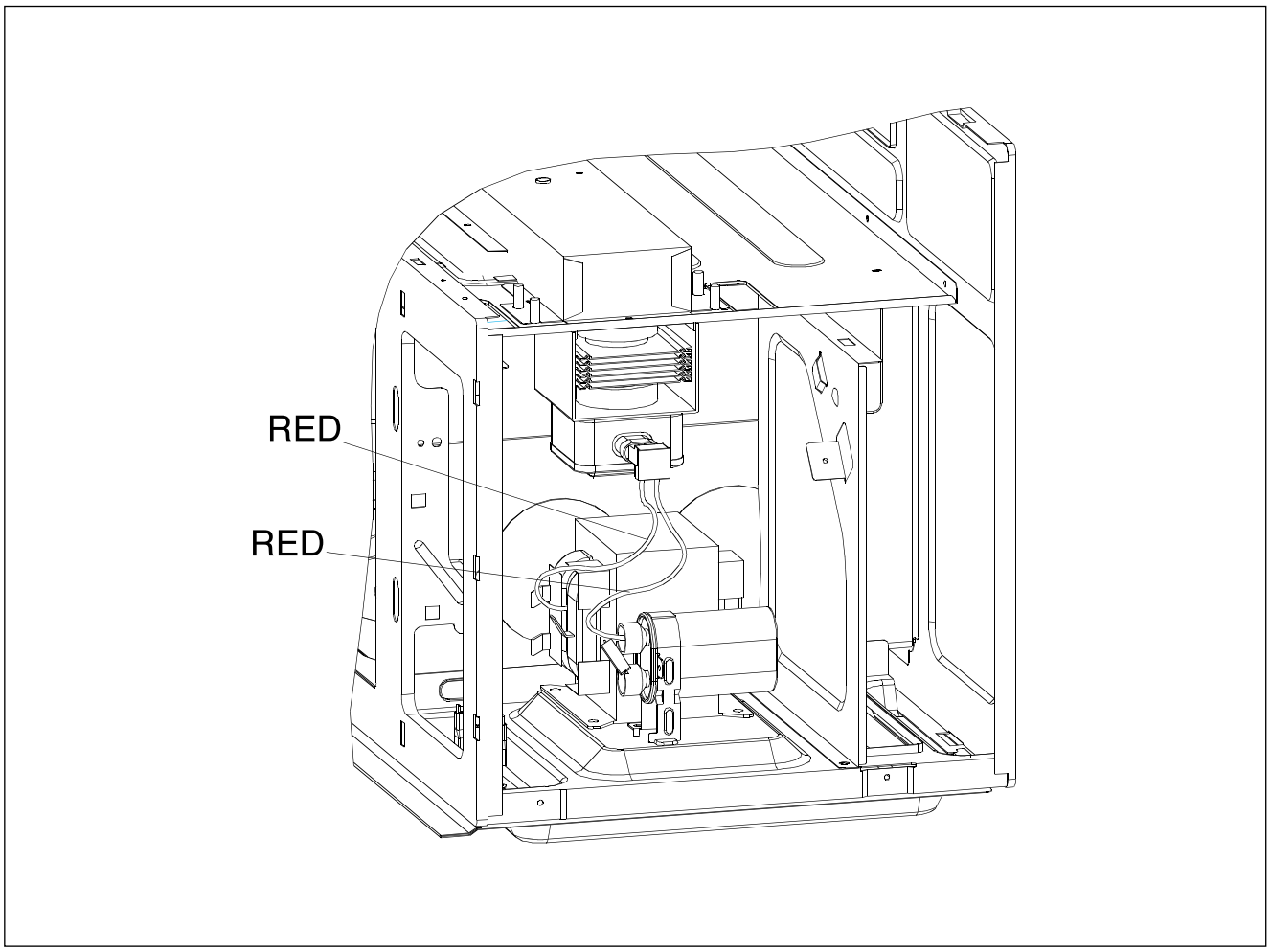


FIG. 20-1

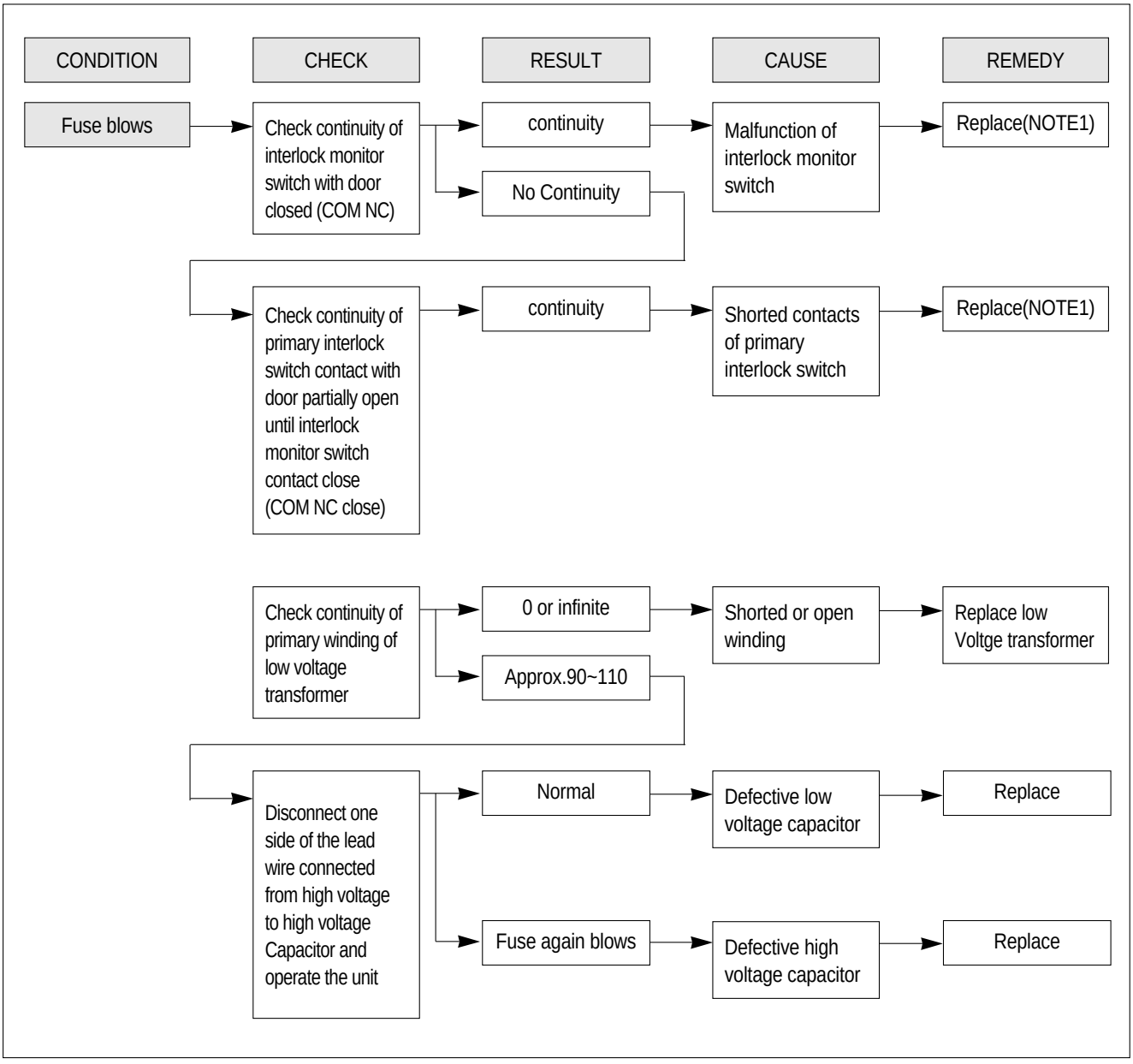
TROUBLE SHOOTING GUIDE

Following the procedures below to check if the oven is defective or not.

1. Check grounding before checking trouble.
2. Be careful of the high voltage circuit.
3. Discharge the high voltage capacitor.
4. When checking the continuity of the switches, fuse or high voltage transformer, disconnect one lead wire from these parts and the check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.
5. Do not touch any part of the circuit on the touch control circuit since static electric discharge may damage this control panel. Always touch yourself to ground while working on this panel to discharge any static charge built up in your body.

   First of all, operate the microwave oven following the correct operation described in users guide manual (instruction manual) by time cooking in order to find the exact cause of any trouble.

(TROUBLE 1) Oven does not operate at all; any input can not be accepted.


CONDITION
CHECK
RESULT
CAUSE
REMEDY
Fuse blows
Check continuity of interlock monitor switch with door closed (COM NC)
continuity
No Continuity
Malfunction of interlock monitor switch
Replace(NOTE1)
Check continuity of primary interlock switch contact with door partially open until interlock monitor switch contact close (COM NC close)
continuity
Shorted contacts of primary interlock switch
Replace(NOTE1)
Check continuity of primary winding of low voltage transformer
0 or infinite
Approx.90~110
Shorted or open winding
Replace low Voltge transformer
Disconnect one side of the lead wire connected from high voltage to high voltage Capacitor and operate the unit
Normal
Fuse again blows
Defective low voltage capacitor
Defective high voltage capacitor
Replace
Replace

NOTE1 All these switches must be replaced at the same time, plese refer to page 14 and 15 for adjustment instructions.

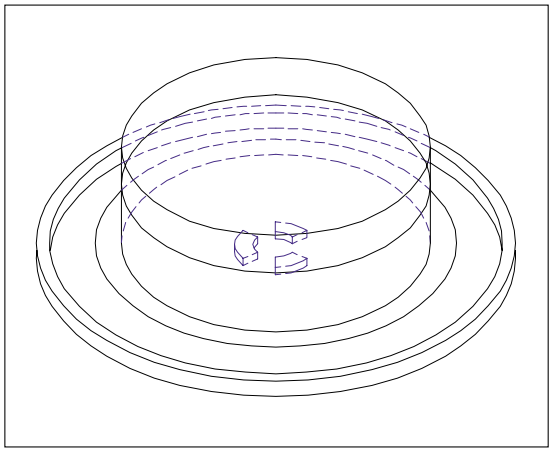
MEASUREMENT AND TEST

1. MEASUREMENT OF THE MICROWAVE POWER OUTPUT

Microwave output power can be checked by indirectly measuring the temperature rise of a certain amount of water exposed to the microwave as directed below.

PROCEDURE

1. Microwave power output measurement is made with the microwave oven supplied at rated voltage and operated at its maximum microwave power setting with a load 1000± 5cc of potable water.
2. The water is contained in a cylindrical borosilicate glass vessel having a maximum material thickness of 3 mm and an outside diameter of approximately 190 mm.
3. The oven and the empty vessel are at ambient temperature prior to the start of the test. The initial temperature of the water is 10± 2˚C (50 ± 3.6˚F). It is measured immediately before the water is added to the vessel. After addition of the water to the vessel, the load is immediately placed on the center of the shelf which is in the lowest normal position.
4. Microwave power is switched on.
   Heating time should be exactly 41 sec.
   Heating time is measured while the microwave Generator is operating at full power. The filament Heat-up time for magnetron is not included.
5. The initial and final water temperature are selected so that the maximum difference between the ambient and final water temperature is 5˚C.
6. The microwave power output P in watts is calculated from the following formula:



$$P=4187 \times \triangle T/t$$

- △T is actual temperature rise.
- t is the heating time.

The power measured should be 1000W 10.0 %.

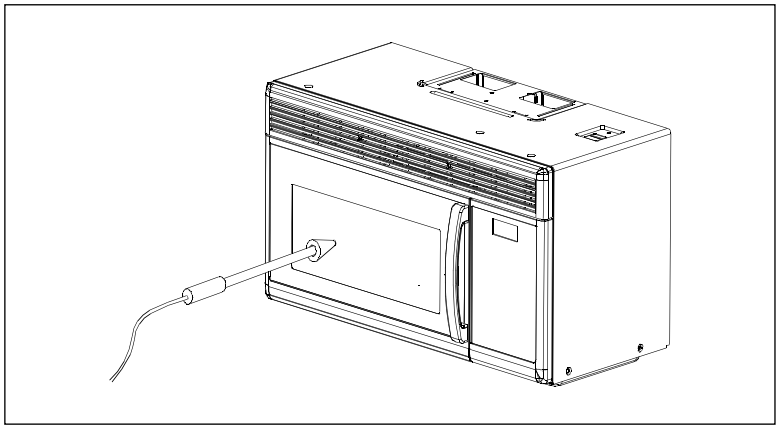
CAUTION :

1. Wather load should be measured exactly to 1 liter.
2. Input ower voltage should be exactly 120V as specified.
3. Ambient temperature should be 20 2˚C(68 ±3.6˚F)

2. MICROWAVE RADIATION TEST

On every service call, checks for microwave energy emission must be made according to the following manner.

1. Remove the cooking rack from the oven cavity, if the microwave oven is, so equipped.
2. Place 275mL(9. oz.) glass of water in the center of the oven bottom.
3. Select “HIGH” cook power, turn the microwave oven on, and test for R.F leakage using the following pattern:
   a) Check around the cabinet at the front
   b) Check around the door
   c) Check around the console panel
   d) Check horizontally across the door
   e) Check vertically across the door
   f) Check diagonally across the door
   g) Check across the air vents
   h) Check across the rear air vent



WARNING :
The scan speed is 1 in./sec.

EQUIPMENT

• Electromagnetic energy leakage monitor(NARDA 8100B,HOLADAYH1501).

*** 600 cc** glass beaker with an inside diameter of approx. 8.5cm (3.5in).

* Glass thermometer **100˚C or 212˚F**

When checking for R.F leakage, use an approved R.F measuring device to assure less than **4mW/cm^2** emission at 5cm distance with a maximum scan rate of **2.5cm/second,** in compliance with U.S. Government Department of Health, Education and Welfare 21 CFR1030, performance Standard for Microwave Ovens.

A proper operating door and seal assembly will normally register small emission, but they must be no greater than **4mW/cm^2** to allow for measurement uncertainty.

All microwave ovens exceeding the emission level of **4mW/cm^2** must be reported to Department of Service for microwave ovens immediately and the owner should be told not to use the microwave oven until it has been repaired completely.

If a microwave oven is found to operate with the door open, report to Department of Service, the manufacturer and **CDRH*** immediately. Also tell the owner not to use the oven.

The interlock monitor switch acts as the final safety switch protecting the customer from microwave radiation.
If the interlock monitor switch operates and opens the line fuse, the interlock switches have failed, and you must replace all of them(primary and secondary interlock switches, and the monitor switch), because their contact may be melted and welded together.
All repairs must be performed so that microwave energy emissions are minimal.

CDRH.-Center for Device and Radiological Health, Food, and Drug Administration.

MAKING THE MEASUREMENTS

MEASURING THE OVEN WITH THE CABINET INSTALLED MEASUREMENT NOTES:

- When measuring for leakage, use the **2"(5cm)** spacer that is provided with the probe.
- Leakage with the outer panels removed should be less than **5mW/cm^2**
- Leakage for a fully assembled oven (before the lamp switch primary is interrupted) with the door opened slightly, should be less than **2mW/cm^2**
- Do not exceed the meter's full-scale deflection.
- Do not move the test probe along the measuring surfaces faster than 1-inch-per-second **(2.5 cm/sec),** otherwise a false reading will occur.
- When testing near a corner of the door, keep the probe perpendicular to the surface, and move it horizontally with out touching the surfaces, otherwise a false reading will occur.
- Hold the test probe by its gripping surface only, otherwise a false reading will occur.

To measure for oven leakage:

1. Pour **275cc(±25cc)** of water into a **600 cc** glass beaker.
2. Place the beaker into the center of the microwave oven.
3. Set the energy leakage monitor to **2,450 MHz,** and use it according to the manufacturer's recommended test procedure to obtain the correct results.
4. Measure the microwave radiation with an electromagnetic radiation monitor. Hold the probe perpendicular to the surface being measured and measure around the door viewing window, the exhaust opening, and air inlet openings.
5. Operate the oven at its maximum energy output, and take the measurements.

MEASURING THE OVEN WITH THE CABINET REMOVED

When the magnetron has been replaced, use the previous procedure, and measure for microwave energy leakage after all of the necessary components are replaced or adjusted, and before the cabinet is installed.
Take special care to measure around the magnetron and the waveguide.

WARNING :

Be careful not to contact any of the high Voltage components when making measurements with the cabinet removed.

3. COMPONENT TEST PROCEDURE

THE THERMOSTAT AND THERMAL CUT OUT

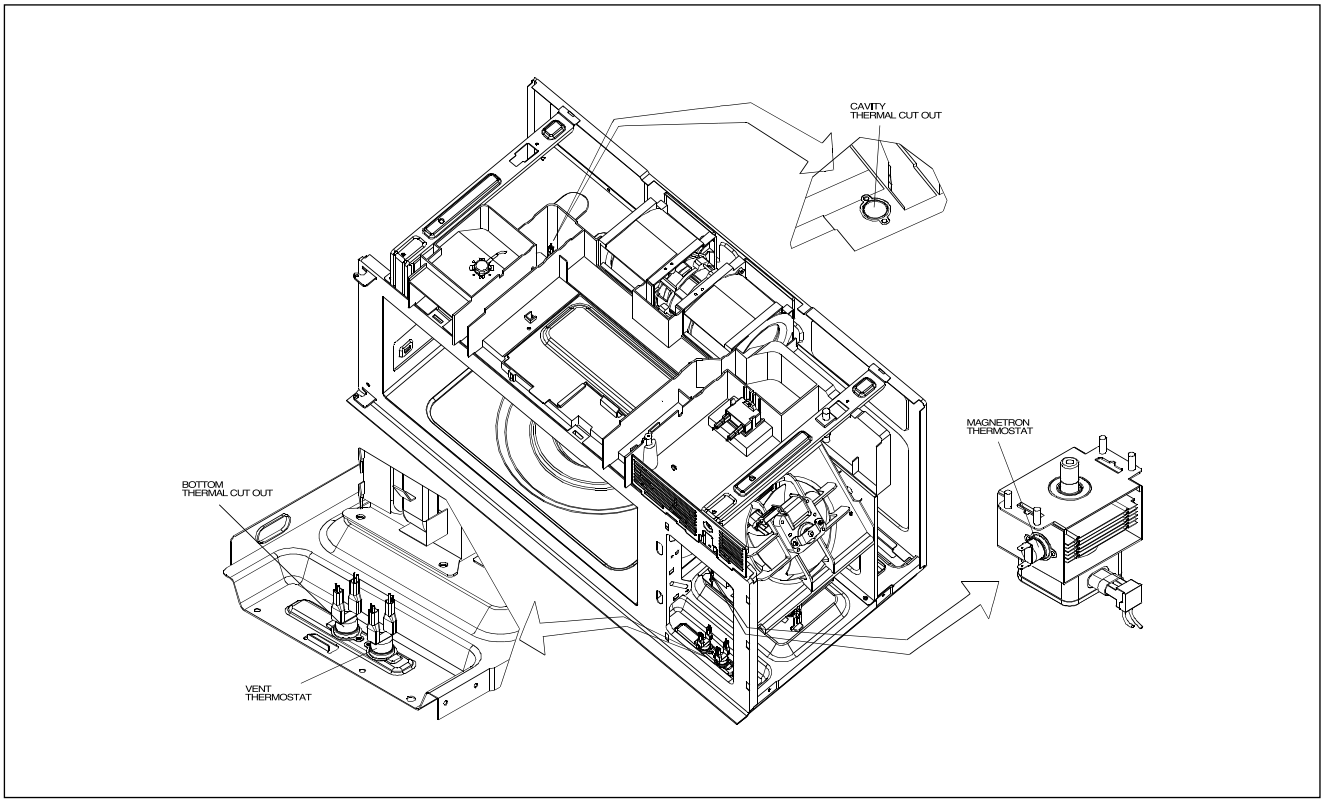
There are One thermostats and Two Thermal Cut Out in the OTR Microwave Oven. They are the cavity thermal cut out and the bottom thermal cut out. The cavity thermal cut out is located air guide top. This thermal cut out is “normally-closed”, and will open at a set temperature to disable the oven.

The bottom thermal cut out is located directly behind the control panel. It is a “normally-closed”, and will open at a set temperature to disable the oven.

The vent thermostat is located directly behind the control panel. It is a “normally-open”, that when closed, the Vent motor activates a low speed. This thermostat is automatically resettable.

POSSIBLE CUSTOMER COMPLAINT:
The unit turns on by itself.

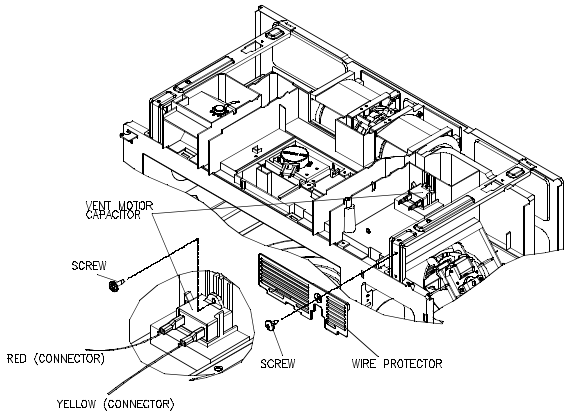
	Open	Reset
Cavity Thermal Cut Out	194 / 90	32 / 0
Bottom Thermal Cut Out	194 / 90	32 / 0
Vent Thermostat	104 / 40	132.8 / 56
Magnetron Thermostat	302 / 150	140 / 60



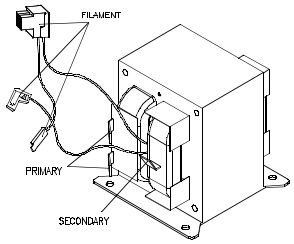
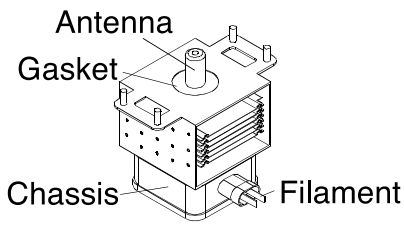
VENT MOTOR CAPACITOR

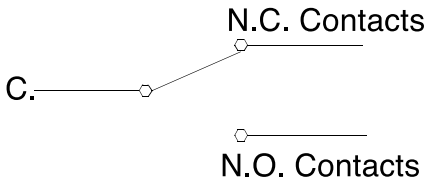
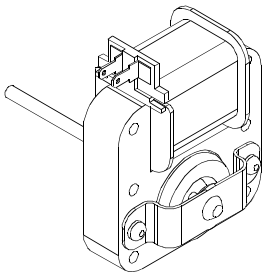
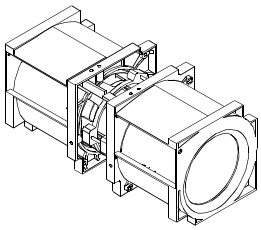
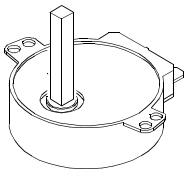
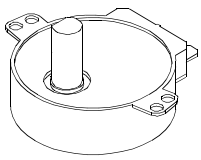
The Vent motor capacitor is located directly behind the control panel.

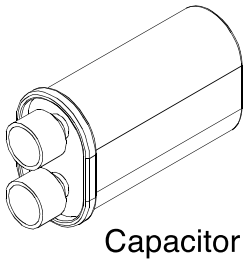
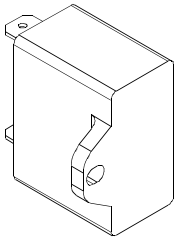
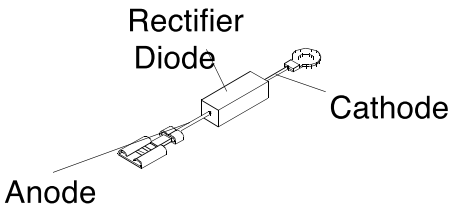
It is in use any time the Vent motor is on. The capacitor helps to maintain a constant voltage to the Vent motor so that it runs more efficiently.



TEST CHARTS

COMPONET	TEST PROCEDURE	RESULT
High Voltage Transformer(With wire leads unplugged) 	1. Set the ohmmeter to the Rx1 scale, and measure the: a) Primary winding b) Secondary winding c) Filament winding 2. Set the ohmmeter to its Rx1000 scale, and measure the: a) Primary to ground b) Filament to ground	a) 0.4 to 0.6 ohms b) 70 to 130 ohms c) 0 ohms a) Normal = infinity b) Normal = infinity
Magnetron(with wire leads unplugged) **NOTE** A microwave energy leakage test must always be performed when the oven is serviced for any reason. **NOTE** Replace the magnetron if the checks and all of the high voltage component tests are good, but the unit still does not heat a load 	1. Set the ohmmeter to its Rx1000 scale, and measure the: a) Filament terminal 2. Set the ohmmeter to its Rx1000 scale, and measure the: a) Filament winding to chassis	a) Normal readings less than 1 a) Normal = infinity

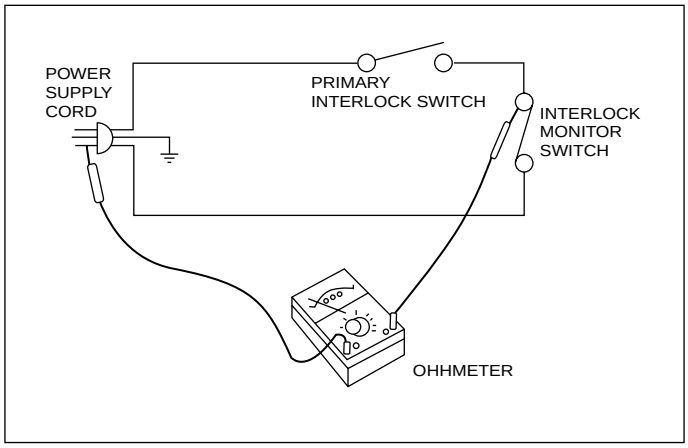
COMPONET	TEST PROCEDURE	RESULT
Switches (with wire leads removed). All of the switches are measured in the same manner.  	N. O. and C Terminals Set the ohmmeter to the R X 1 scale, and measure the resistance between the normally-open (N.O.) and the common (C) terminals of the switch.	a) Normal - The meter indicates infinity. b) Abnormal - The meter indicates zero ohms (a short).
	N. O. and C Terminals Set the ohmmeter to the R X 1 scale, and measure the resistance between the normally-close (N.C.) and the common (C) terminals of the switch.	a) Abnormal - The meter indicates infinity. b) Normal - The meter indicates zero ohms (a short).
Fan Motor (with leads disconnected) 	Set the ohmmeter to the R x 1 scale, and measure across the terminals.	a) Fan Motor - Normal = 30 to 50 ohms
Blower Motor (with leads disconnected) 	Set the ohmmeter to the R x 1 scale, and measure the: a) High speed windings (blue and black wires) b) Low speed windings (blue and white wires)	a) Normal - High speed : 25 to 45 ohms b) Normal - Low speed : 45 to 65 ohms
Stirrer Motor (with leads disconnected) 	Set the ohmmeter to the R x 1000 scale, and measure the resistance between the motor terminals.	a) Normal - 3k to 4k ohms b) Abnormal - infinite or zero ohms
Turn Table Motor (with leads disconnected) 	Set the ohmmeter to the R x 1000 Scale, and measure the resistance between the motor terminals.	a) Normal - 3k to 4k ohms b) Abnormal - infinite or zero ohms

COMPONET	TEST PROCEDURE	RESULT
High Voltage Capacitor  	Terminal-To-Terminal Set the ohmmeter to the Rx10k scale, and measure the resistance across the capacitor terminals.	a) Normal - The meter indicates several ohms, then gradually returns to infinity. b) Abnormal - The meter indicates infinity, or zero ohms (a short) immediately.
	Terminal-To-Case Set the ohmmeter to the Rx1 scale, and measure the resistance between each terminal and the case.	a) Normal - The meter indicates infinity. b) Abnormal - The meter indicates zero ohms, or a short.
Vent Motor Capacitor 	Terminal-To-Terminal Set the ohmmeter to the Rx10k scale, and measure the resistance across the capacitor terminals.	a) Normal - The meter indicates several ohms, then gradually returns to infinity b) Abnormal - The meter indicates infinity, or zero ohms (a short) immediately.
High Voltage Diode  	Forward Continuity Set the ohmmeter to the Rx1 scale, and measure forward resistance across the rectifier terminals with the (+) lead touching the anode and the (–) lead touching the cathode.	a) Normal - The meter indicates several ohms. b) Abnormal - The meter indicates continuity, or zero ohms (a short).

4. SAFETY INTERLOCK CONTINUITY TEST

- You can test continuity of safety interlock and monitor switch by using ohmmeter.
- The switch operation is checked by zero/untimited.
  The meter should indicate zero resistance.
- The sequence of check is interlock monitor switch, primary and secondary interlock switches check.

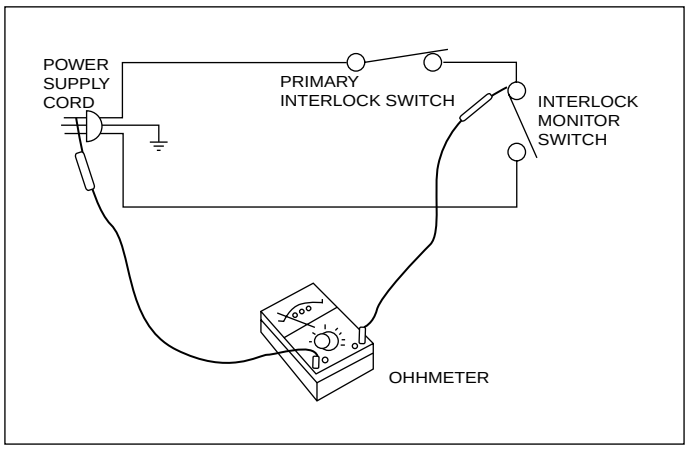
1. In case of interlock monitor switch check.



Condition

1) Door is opened.
2) Common terminal of the monitor switch is connected.

2. In case of primary interlock switch check.

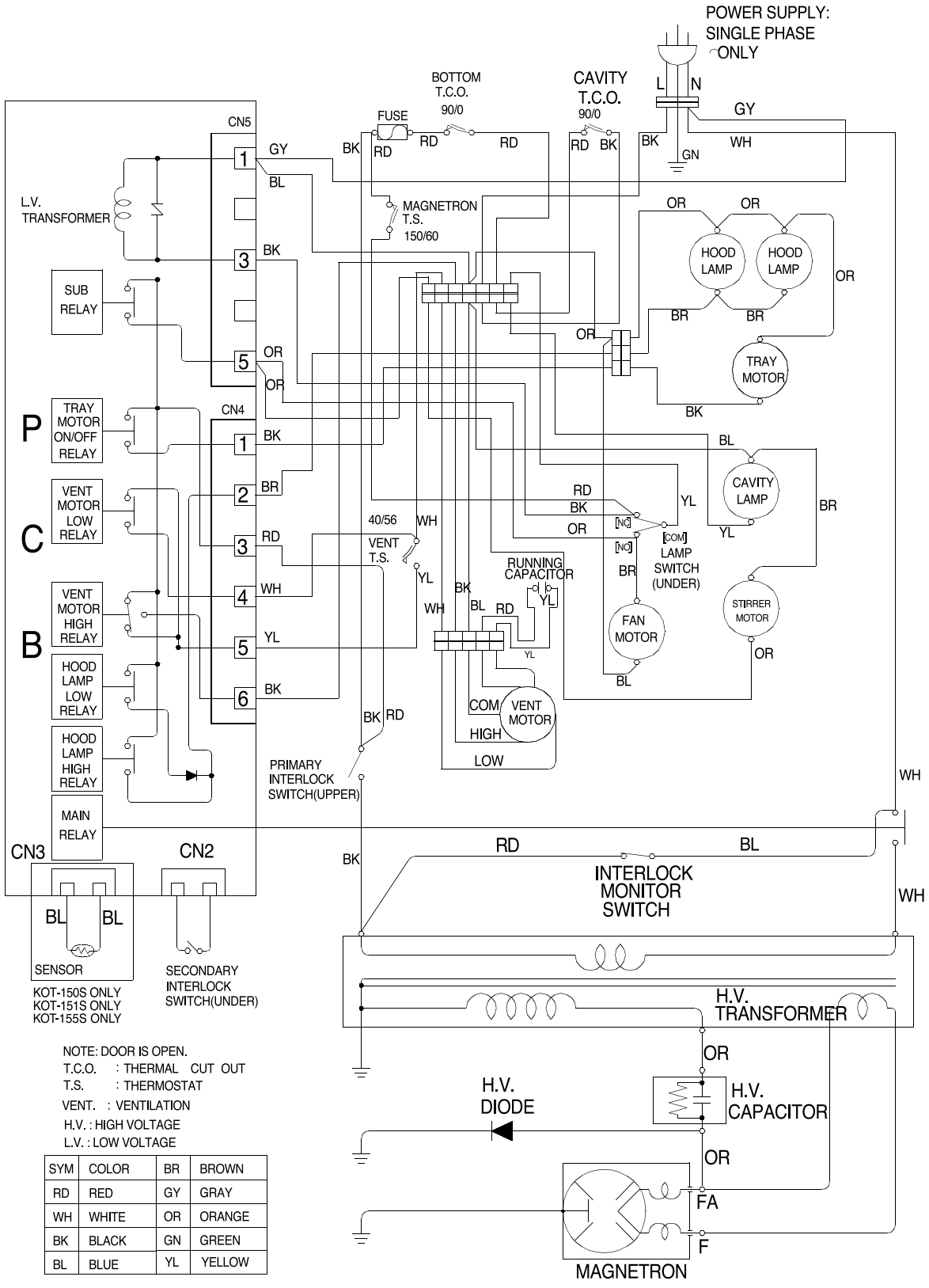


Condition

1) Door is closed.

WIRING DIAGRAM

1. WIRING DIAGRAM



NOTE: DOOR IS OPEN.
T.C.O. : THERMAL CUT OUT
T.S. : THERMOSTAT
VENT. : VENTILATION
H.V. : HIGH VOLTAGE
L.V. : LOW VOLTAGE

SYM	COLOR	BR	BROWN
RD	RED	GY	GRAY
WH	WHITE	OR	ORANGE
BK	BLACK	GN	GREEN
BL	BLUE	YL	YELLOW

2. CIRCUIT DESCRIPTION

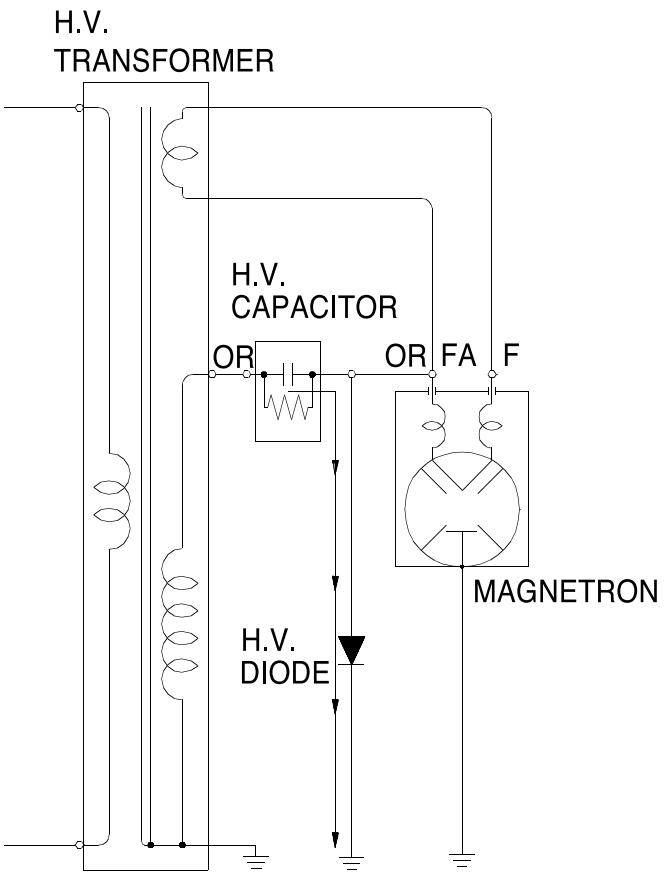
MICROWAVE COOKING

- TIME COOKING

1. When the food is placed inside the oven and door is closed.
   1) The low voltage transformer supplies the necessary voltage to the touch control circuit when the power cord is plugged in.
   2) The contacts of the interlock monitor switch open.
      This switch creates short circuit to blow 20A fuse and stop magnetron oscillation when door is opened during operation under abnormal condition (i.e. the contacts of primary interlock switch do not open the circuit).
   3) The contacts of primary interlock switch close the primary circuit.

2. When cooking cycle, power and time are set by touching the function pads and the desined mumerical pads.
   1) The function indicating bars are located on the digitron light to indicate that function have been set.
   2) The time you set appears in the display window.
   3) The touch control circuit memorizes the cooking program you set.

3. When the start pad is touched.
   The RELAY 1,5 and 6 are controlled by the touch control circuit.
   1) 120VAC is applied to the high voltage transformer through the contacts of RELAY 1
   2) Fan motor starts rotating and cools the magnetron by blowing the air coming from the intake on the rear plate hole.
   3) The oven lamp lights the inside of the oven.
   4) Indicator light turns on to indicate function operation. Cooking time starts count down.
   5) 3.3 Volts AC is generated from filament winding of the voltage transformer. This filament voltage is applied to the magnetron to heat the magnetron filament through two noise preventing choke coils.
   6) A high voltage of 2000 Volts AC is generated in the secondary of high voltage transformer and this secondary voltage is increased by the action of the diode and the charging of the high voltage capacitor. This resultant DC voltage is then applied to the anode of the magnetron. As shown in Figure the first half cycle of the high voltage produced in the voltage transformer secondary charges the high voltage capacitor. Current flow is in the direction of the dotted-line during the second half cycle, the voltage produced by the transformer secondary, and the charge of the high voltage capacitor are combined and applied to the magnetron as shown by the solid line so that oscillations begin. The disturbance wave generated by the magnetron is prevented by the choke coils of 3.2mH, filter capacitors of 16pF and the magnetron's shielded case so that TV and radio programs are not impaired by noise.



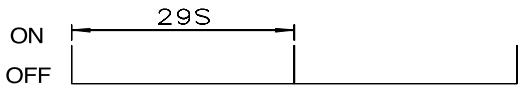
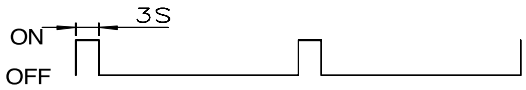
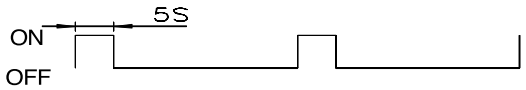
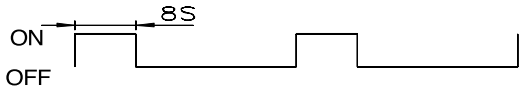
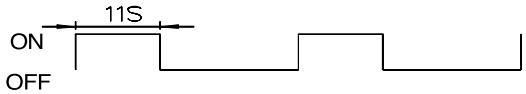
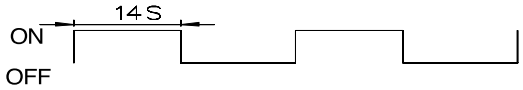
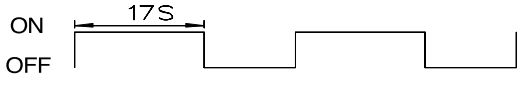
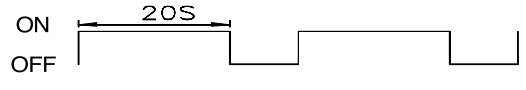
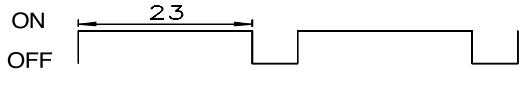
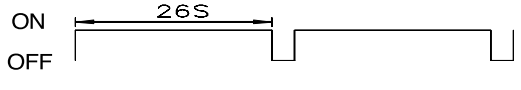
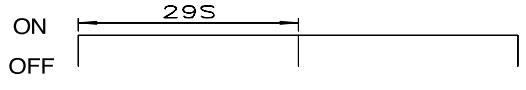
The Touch control circuit controls the ON-OFF time of RELAY 1 in order to vary the output power of the microwave oven from power level 1 to HI (100%) power.
One complete ON and OFF cycle of the RELAY 1 is 29 seconds. The relation between indications on the control panel and the output of the microwave oven is as shown.

AUTO DEFROST CYCLE
When auto defrost is selected and the desired defrosting time is chosen, the automatic cycle divides the defrosting time into 5 periods of alternating defrost and stand times, by cycling on and off.

4. When the door is opened during cooking.
   1) The primary interlock switch is opened to cut off primary voltage to the high voltage transformer to stop microwave oscillation.
   2) The secondary interlock switch is opened to give the door open information to touch control circuit. The contacts of the RELAY 1,5 and 6 open, the display stops counting down.

3) Fan motor and turn table stop rotating
4) The oven lamp turns off.
5) As soon as the door is opened, the interlock monitor switch contacts close and creates the short circuit.
6) If the contacts of primary interlock switch malfunction the 20A fuse blows open due to the large current surge caused by the short circuit activation, and this in turn stops magnetron oscillation.

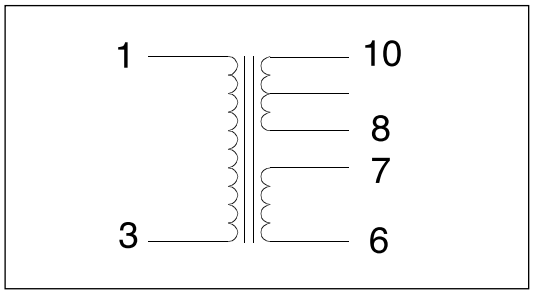
5. When the CANCEL/OFF pad is touched during cooking.
1) The touch control circuit the voltage supplied to the RELAY 1 coil and causes the magnetron to stop oscillating.
2) RELAY 5 and 6 turns off.
3) The display will show the time of day. If you don't set the clock, the display will show a colon.
4) The oven lamp turns off.
5) Fan motor and turn table motor stop rotating.

POWER LEVEL	OUTPUT POWER AGAINST FULL POWER	RELAY 1 TURN ON, OFF TIME
P-0	0/29(0%)	
P-10	3/29(10%)	
P-20	5/29(17%)	
P-30	8/29(28%)	
P-40	11/29(38%)	
P-50	14/29(48%)	
P-60	17/29(59%)	
P-70	20/29(69%)	
P-80	23/29(79%)	
P-90	26/29(90%)	
P-HI	29/29(100%)	

PRINTED CIRCUIT BOARD

1. CIRCUIT CHECK PROCEDURE

1) Low voltage transformer (DMR-210P) check
The low voltage transformer is located on the PCB
Measuring condition : Input voltage : 120 V
Frequency : 60Hz

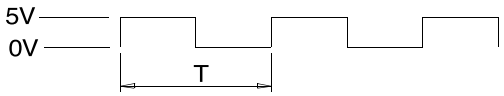
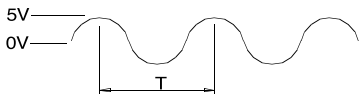


Terminal / Voltage	LOAD	NO LOAD
6 - 7	AC 17V	AC 20V
8 - 10	AC 2.6V	AC 3.1V

NOTE :
Secondary side voltage of the low votage transformer changes in proportion to fluctuation of power source voltage.

NOTE :
The allowable tolerance of the secondary voltage is within 5% of normal voltage.

2. Voltage Check
- KEY CHECK POINT

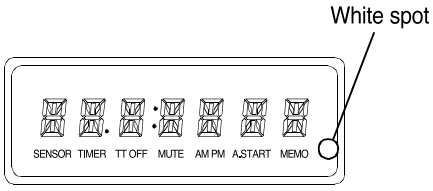
NO	CHECK POINT	REMARK
1	IC1 PIN 63, 64	+5VDC
2	IC1 PIN 25	–24VDC
3	IC1 PIN 38	 T : 16.67ms (60Hz)
4	IC1 PIN 33 OR 34	 T : 250 ns
5	DP1 PIN 1, 2 & 32, 33	2.6 VAC (DISPLAY FILAMENT VOLTAGE)

- CHECK METHOD

NO	MEASURE POINT (FIG.21)	WAVE FORM	REMEDY	REMARK
1	MP1	DC +5V±0.25	REPLACE Q5, EC1, C8, ZD4	NO LOAD
2	MP2	DC +24V±1.0	REPLACE EC6, R28, D21~D24	NO LOAD
3	MP3	DC -24V±1.0	REPLACE ZD3, ZD6, C7, EC4	NO LOAD

NOTE :
Each measure point must be measured with GND points.

3) Display problems

NO	CAUSE	MEASUREMENT	RESULT	REMEDY
1	Poor contact between PCB and display filament	Check the voltage of PIN 1, 2 & PIN 32, 33	2.6 VAC	FIX the PIN 1,2 & 32, 33 on the PCB
2	Defective display	Refer to the display trouble shooting data below.		Replace PCB assembly
3	Loss of vacuum in the display		White spot is generated on the display	Replace PCB assembly

- THE DISPLAY TROUBLE SHOOTING DATA

TROUBLE	DISPLAY NAME & PIN NO.	MICOM OUTPUT IN PIN NO.
MEMO doesn't come on.	GRID1 (1G), 24	7
A.STSART doesn't come on.	GRID2 (2G), 25	6
AM, PM doesn't come on.	GRID3 (3G), 26	5
:, MUTE don't come on.	GRID4 (4G), 27	4
TT OFF doesn't come on.	GRID5 (5G), 28	3
•, TIMER don't come on.	GRID6 (6G), 29	2
SENSOR don't come on.	GRID7 (7G), 30	1
SEGMENT "a" doesn't come on from G1 to G7	SEGMENT a, 11	17
SEGMENT "b" doesn't come on from G1 to G7	SEGMENT b, 7	21
SEGMENT "c" doesn't come on from G1 to G7	SEGMENT c, 16	12
SEGMENT "d" doesn't come on from G1 to G7	SEGMENT d, 14	14
SEGMENT "e" doesn't come on from G1 to G7	SEGMENT e, 17	11
SEGMENT "f" doesn't come on from G1 to G7	SEGMENT f, 4	24
SEGMENT "g" doesn't come on from G1 to G7	SEGMENT g, 5	23
SEGMENT "h" doesn't come on from G1 to G7	SEGMENT h, 6	22
SEGMENT "i" doesn't come on from G1 to G7	SEGMENT i, 8	20
SEGMENT "j" doesn't come on from G1 to G7	SEGMENT j, 18	10
SEGMENT "k" doesn't come on from G1 to G7	SEGMENT k, 9	19
SEGMENT "l"doesn't come on from G1 to G7	SEGMENT l, 10	18
SEGMENT "m" doesn't come on from G1 to G7	SEGMENT m, 13	15
SEGMENT "n" doesn't come on from G1 to G7	SEGMENT n, 19	9
•, :, AM don't come on.	UPPER BAR p15, 15	13
SENSOR, TIMER, TTOFF, MUTE, PM, A.START, MEMO don't come on.	LOWER BAR p16. 12	16

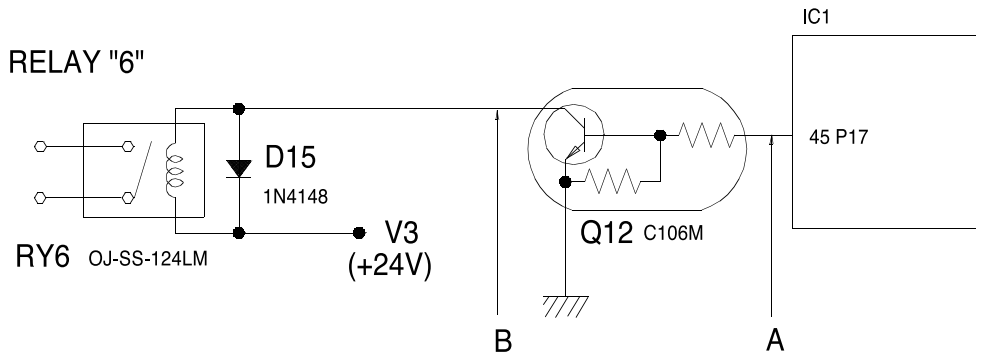
MEASURE POINT

4) When there is no microwave oscillation

When touching START pad, oven lamp does not turn on.

Fan motor does not rotate, but cook indicator in display comes on.

*Cause: RELAY 6 does not operate.



- CHECK METHOD

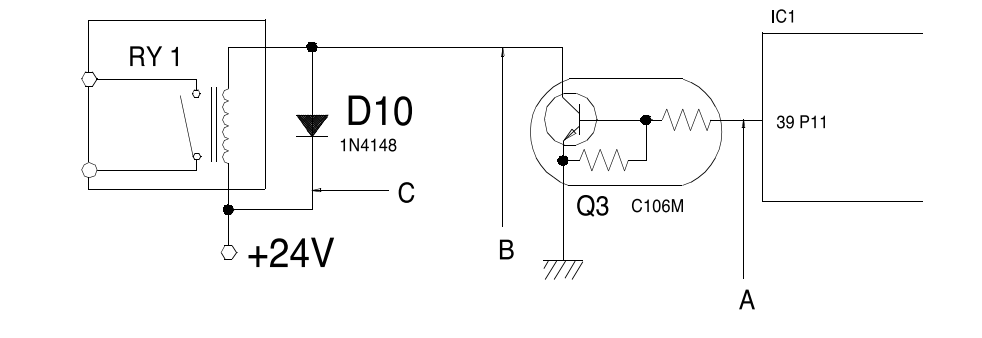
STAGE POINT	A	B
RELAY 6 ON	+5VDC	GND
RELAY 6 OFF	GND	+24VDC

When touching START pad, oven lamp turns on.

Fan motor and turntable rotate and cook indicator in display comes on.

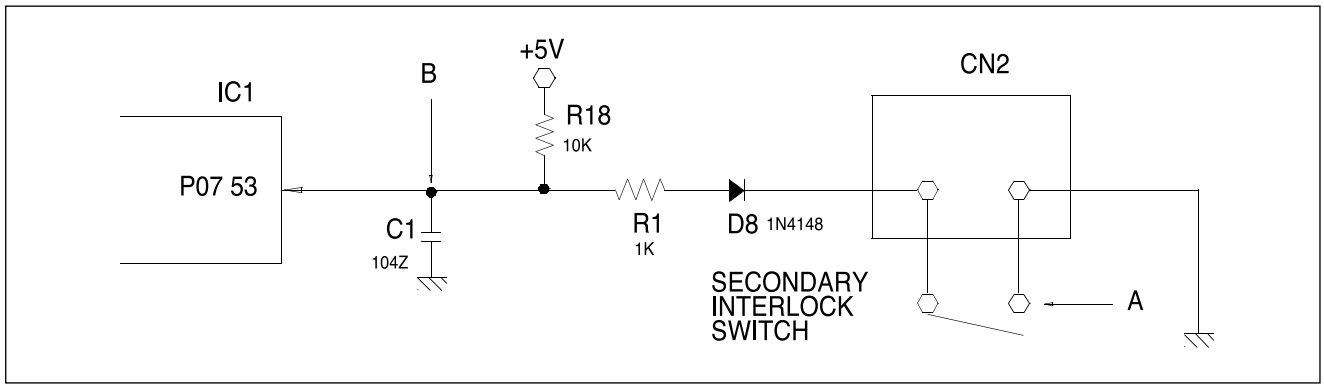
*Cause: RELAY 1 does not operate.

- CHECK METHOD



STAGE POINT	A	B	C
RELAY 1 ON	+5VDC	GND	+24VDC
RELAY 1 OFF	GND	+24VDC	+24VDC

5)When the door is opened during operation, the Count down timer does not stop.

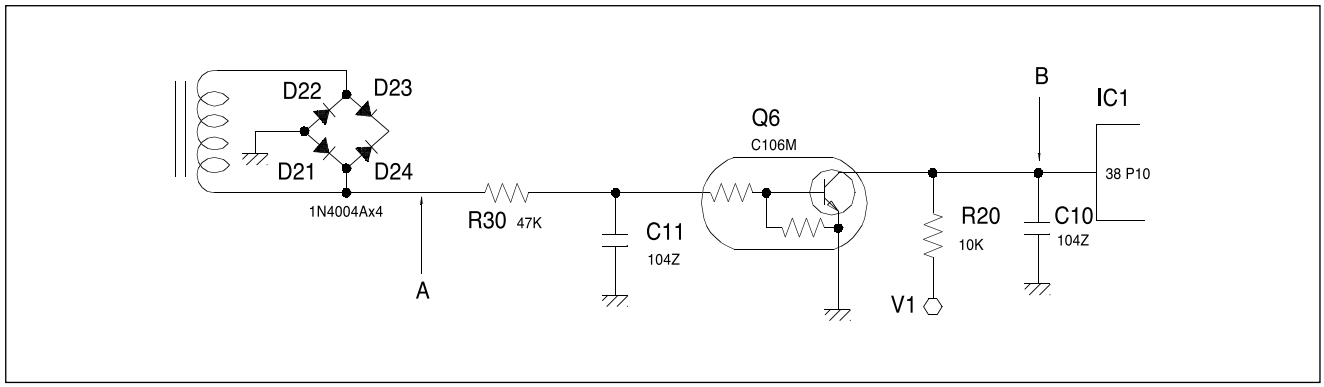


- CHECK METHOD

STAGE POINT	A	B
1) DOOR OPEN	OPEN	+5VDC
2) DOOR CLOSED	CLOSED	GND

CHECK NO.	METHOD	REMEDY
1	Check the stage (ON, OFF) of the secondary interlock switch by resistance measurement.	Replace secondary interlock switch.

6) When the digital clock does not operate properly.

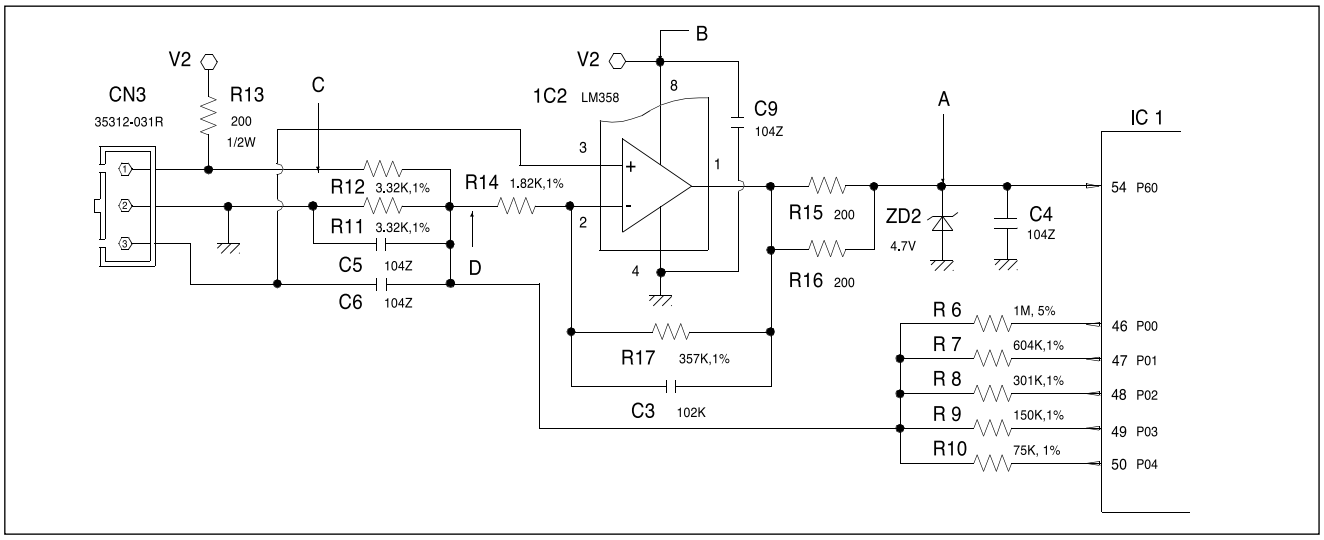


- CHECK METHOD

POINT	WAVE FORM
A	T: 16.67 ms
B	+5V 0V T T: 16.67 ms (60 Hz)

If clock does not keep exact time, you must check resistor R20, transistor Q6

6) When Er01 & Er03 come on display.



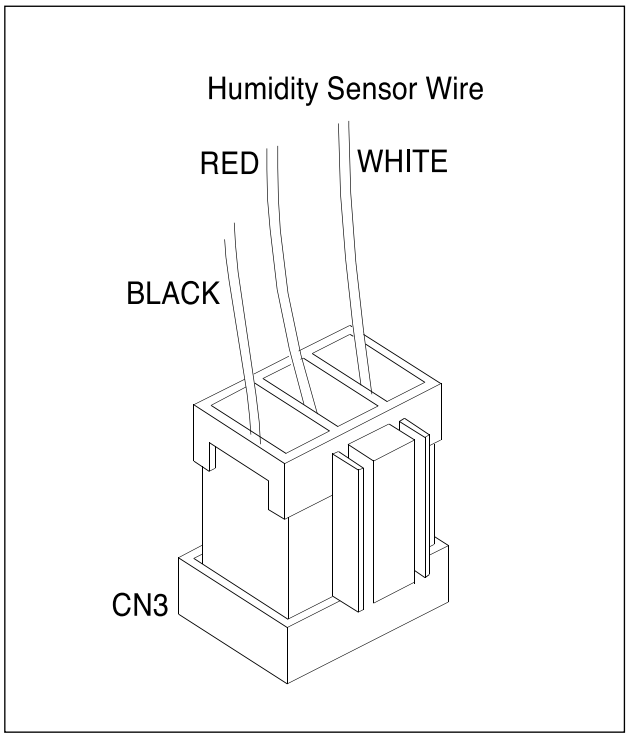
-CHECK METHOD

When AUTO REHEATING is just operating, check the point A, B, C, & D after 1~2 minutes.

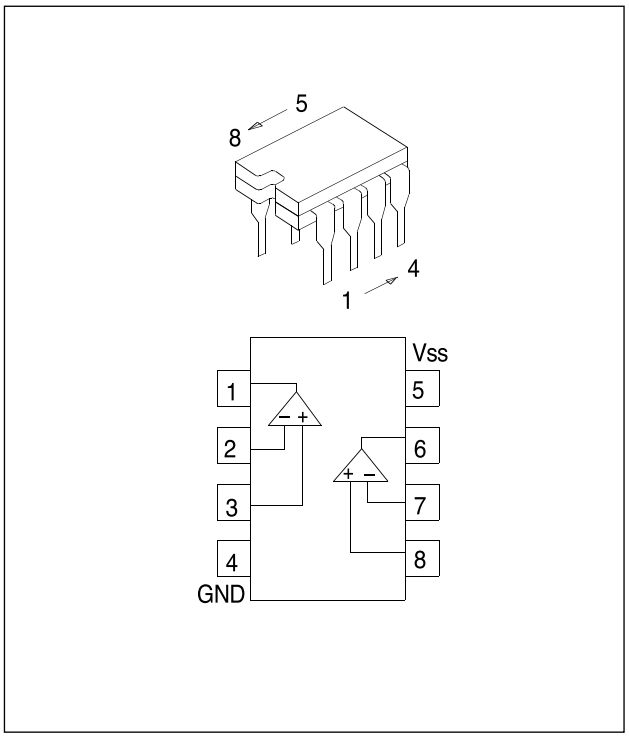
NO	CHECK POINT	REMARK	Tolerance
1	A	0.5V≤VALUE≤3.5V	–
2	B	11.3Vdc	±5%
3	C	4.4Vdc	±5%
4	D	2.2Vdc	±5%

R 6~10 & connecting status of humidity sensor must be checked before checking point A, B, C & D.

* The Method of connecting humidity sensor



* IC2(LM358)



TROUBLE SHOOTING

Following the procedures below to check if the oven is defective or not.

1. Check grounding before checking trouble.
2. Be careful of the high voltage circuit.
3. Discharge the high voltage capacitor.
4. When checking the continuity of switches of of the high voltage transformer, disconnect one lead wire from these parts and then check conitnuity with the AC plug removed. To do otherwise may result in false reading of damage to your meter.
5. Do not touch and part of the circuitry on the touch control circuit since static electric discharge may damage this control panel.

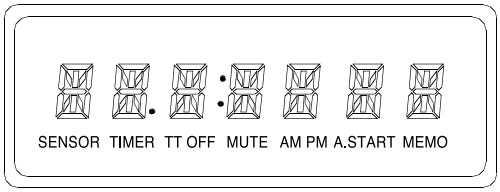
Always touch yourself to ground while working on this panel to discharge any static charge built up in your body.

First of all operate the microwave oven following the correct operation described on pages 6~19 by time cooking, in order to find the exact cause of any trouble.

(TROUBLE 1) The following visual conditions indicate a probable defective touch control circuit or membrane switch assembly.

1. Incomplete segments.
   (A) Segments missing.
   (B) Partial segments missing.
   (C) Digit flickering other than normal fluorescent slight flickering.
   (D) "TOUCH CLOCK PAD TO ENTER TIME OF DAY" does not disply when power is on.
2. A distinct change in the brightness of one or more numbers in the display.
3. One of more digits in the display are not on when they should be.
4. Display indicates a number different from one touched.
5. For example, touch 5 and 3 appears in the display.
6. Specific numbers (for example 5 and 3) will not display when the panel is touched.
7. Display does not count down or up with time cooking or clock operation.
8. Oven is programmable and cooks normally but no display shows.
9. Display obviously jumps in time while counting down.
10. Display counts down noticeably too fast while cooking.
11. Display can not shift from the first stage cooking to the third stage cooking while 3 phase cooking (including defrost).
12. Display does not show the time of day when dear pad is touched (in clock mode).
13. Oven lamp and fan motor and tum table motor do not stop although cooking is finished.

Check if the RELAY 5 and 6 contacts close if they are close, replace touch control circuit.



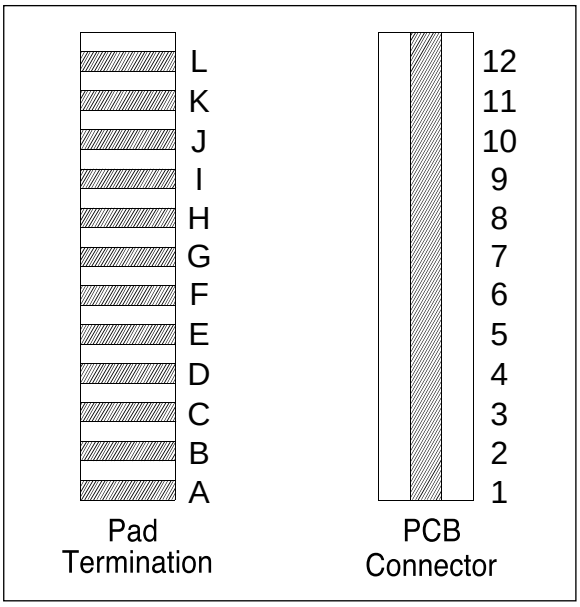
(TROUBLE 2) Digital readout display does not show programming, even if the membrane keyboard is programmed by touching proper pads.

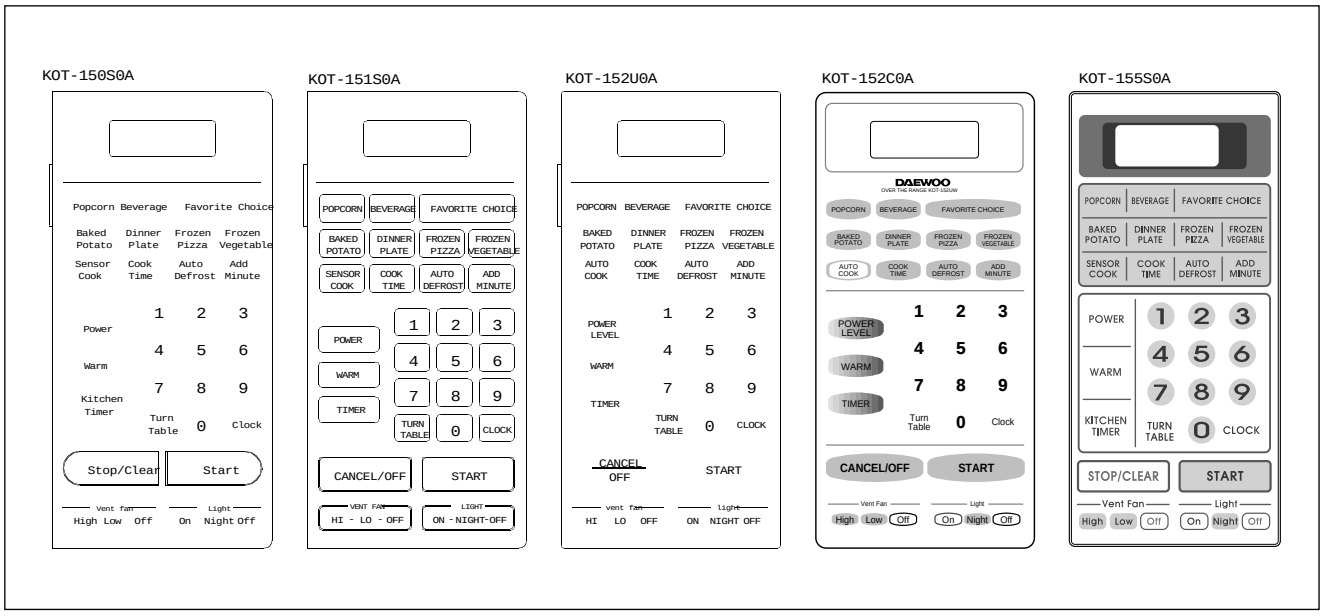
NOTE :

Before following the particular steps listed above in the trouble shooting guide for the membrane keyboard, failure, please check for the continuity of each wire-harness between the membrane keyboard and control box assembly.

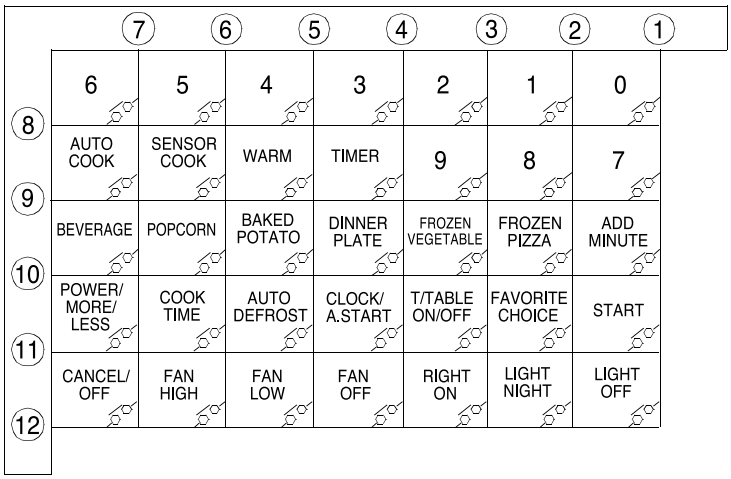
MEMBRANE KEYBOARD CHECK PROCEDURE

1. Check the pad termination order and nomenclature





2. Type of encoding and pad names



The membrane keyboard consists of 35 keys whose configurations are described above and provide 12 pad termintions to be connected to the touch control circuit.

3. Key check procedure

To determine if the membrane keyboard is defective or not, check the continuity of each pad(key) contacts with a multimeter.

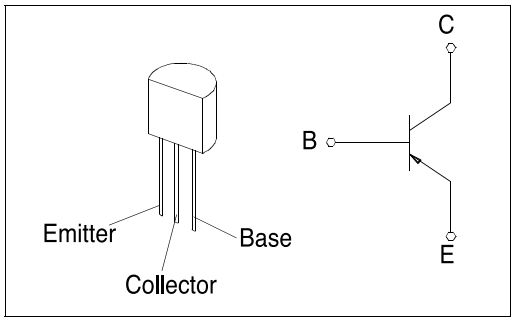
1) 0	pad : Between A and H
2) 1	pad : Between B and H
3) 2	pad : Between C and H
4) 3	pad : Between D and H
5) 4	pad : Between E and H
6) 5	pad : Between F and H
7) 6	pad : Between G and H
8) 7	pad : Between A and I
9) 8	pad : Between B and I
10) 9	pad : Between C and I
11) TIMER	pad : Between D and I
12) WARM	pad : Between E and I
13) SENSOR COOK	pad : Between F and I
14) AUTO COOK	pad : Between G and I
15) ADD MINUTE	pad : Between A and J
16) FROZEN PIZZA	pad : Between B and J
17) FROZEN VEGETABLE	pad : Between C and J
18) DINNER PLATE	pad : Between D and J
19) BAKED POTATO	pad : Between E and J

20) POPCORN	pad : Between F and J
21) BEVERAGE	pad : Between G and J
22) START	pad : Between A and K
23) FAVORITE CHOICE	pad : Between B and K
24) TURNTABLE ON/OFF	pad : Between C and K
25) CLOCK/AUTO START	pad : Between D and K
26) AUTO DEFROST	pad : Between E and K
27) COOK TIME	pad : Between F and K
28) POWER LEVEL/MORE/LESS	pad : Between G and K
29) LIGHT OFF	pad : Between A and L
30) LIGHT NIGHT	pad : Between B and L
31) LIGHT ON	pad : Between C and L
32) FAN OFF	pad : Between D and L
33) FAN LOW	pad : Between E and L
34) FAN HIGH	pad : Between F and L
35) CANCEL/OFF	pad : Between G and L

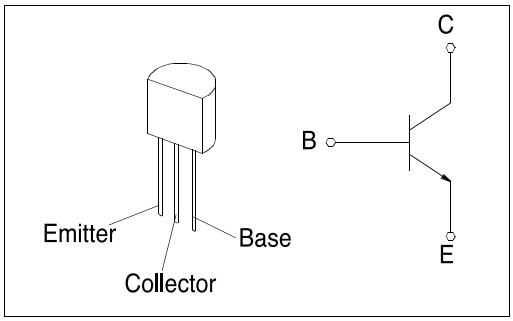
2. COMPONENT INFORMATION

1) TRANSISTOR

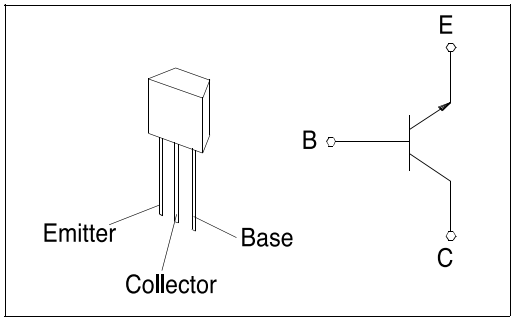
KTA1270Y



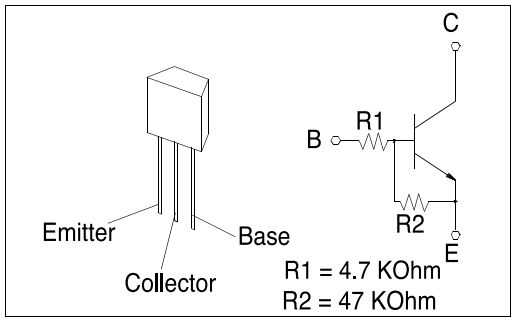
KTC3198GR



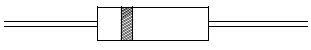
KTC1027Y



KRC106M



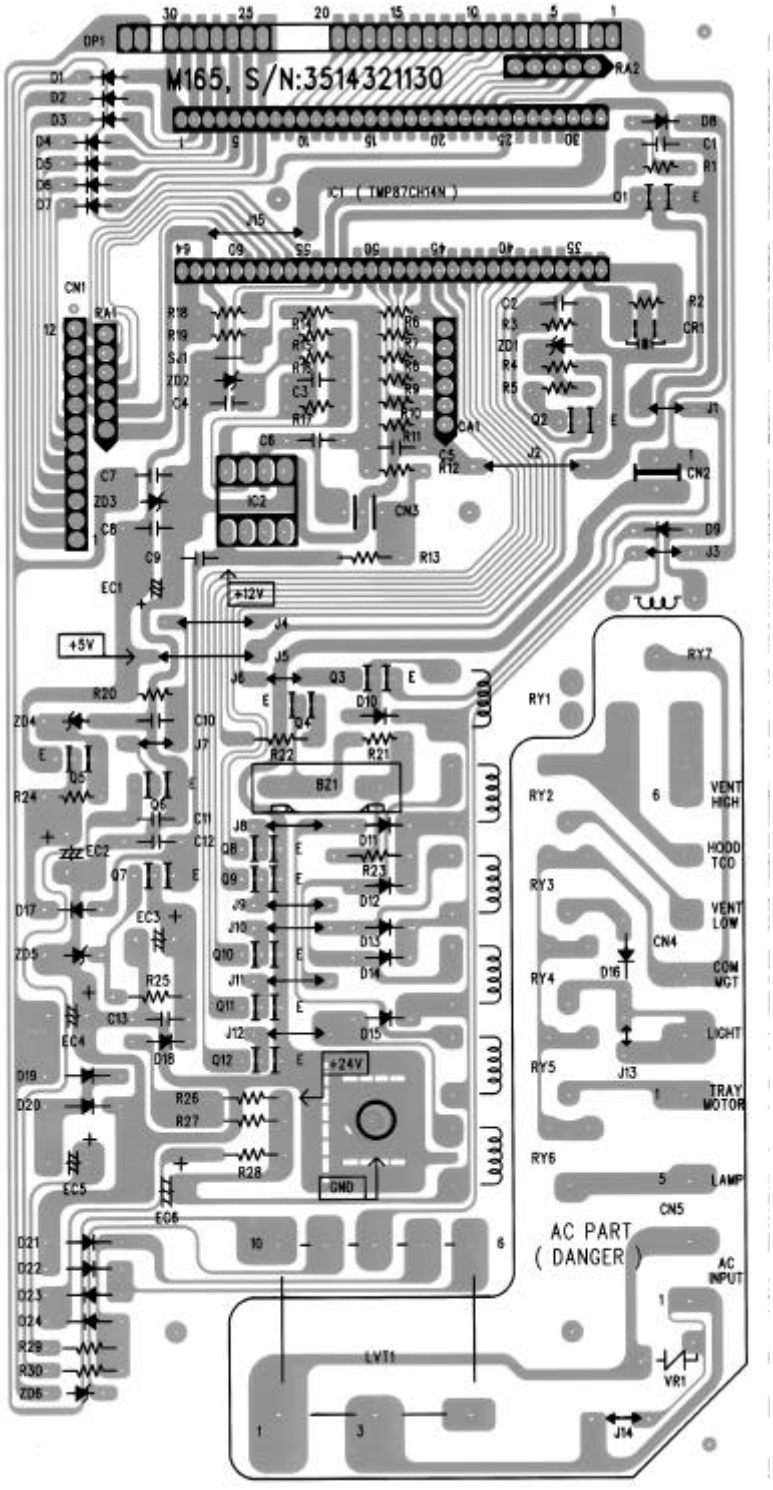
2) DIODE AND ZENER DIODE

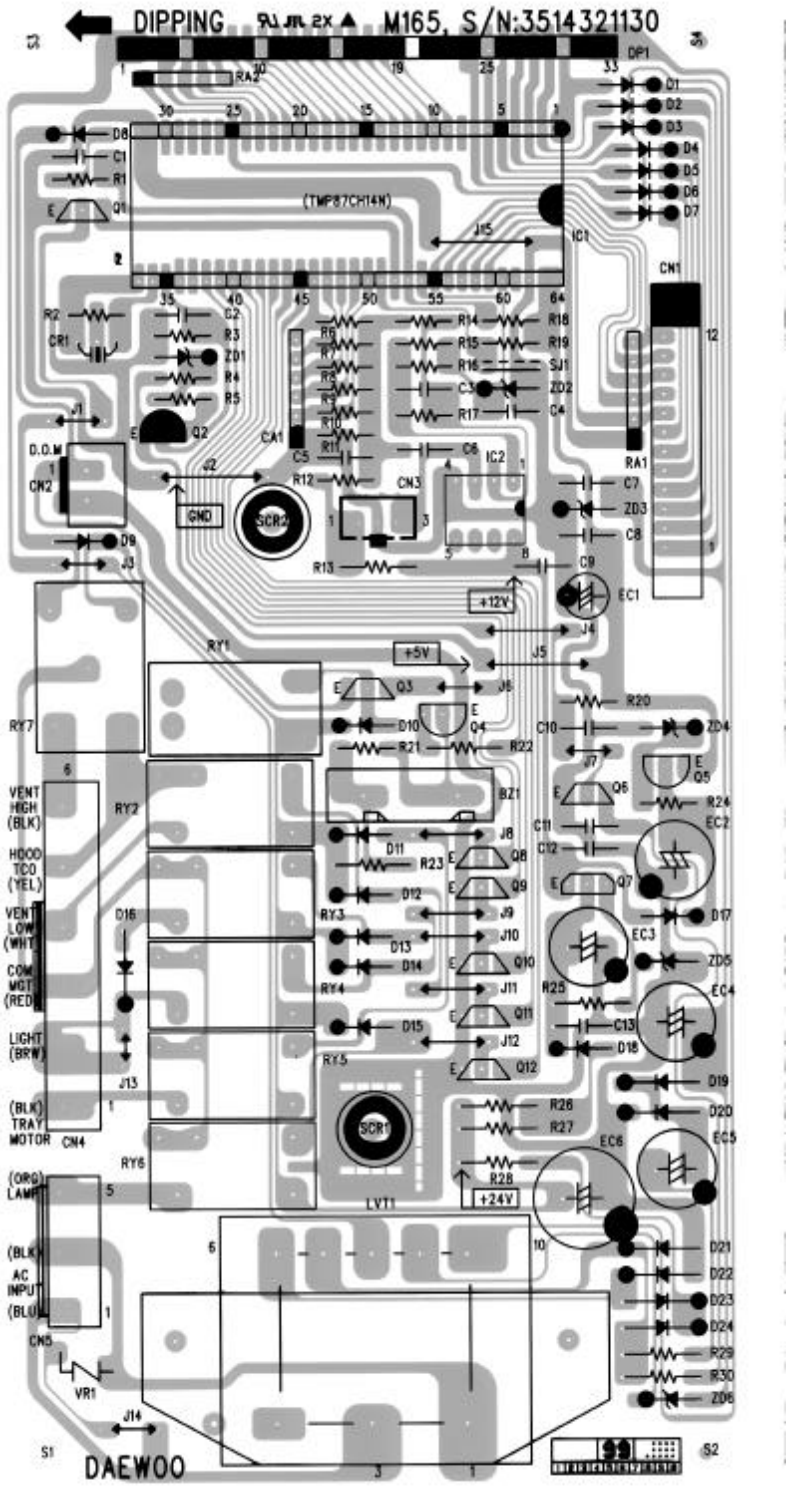


DIODE CATHODE(K) ANODE(A) D1-24

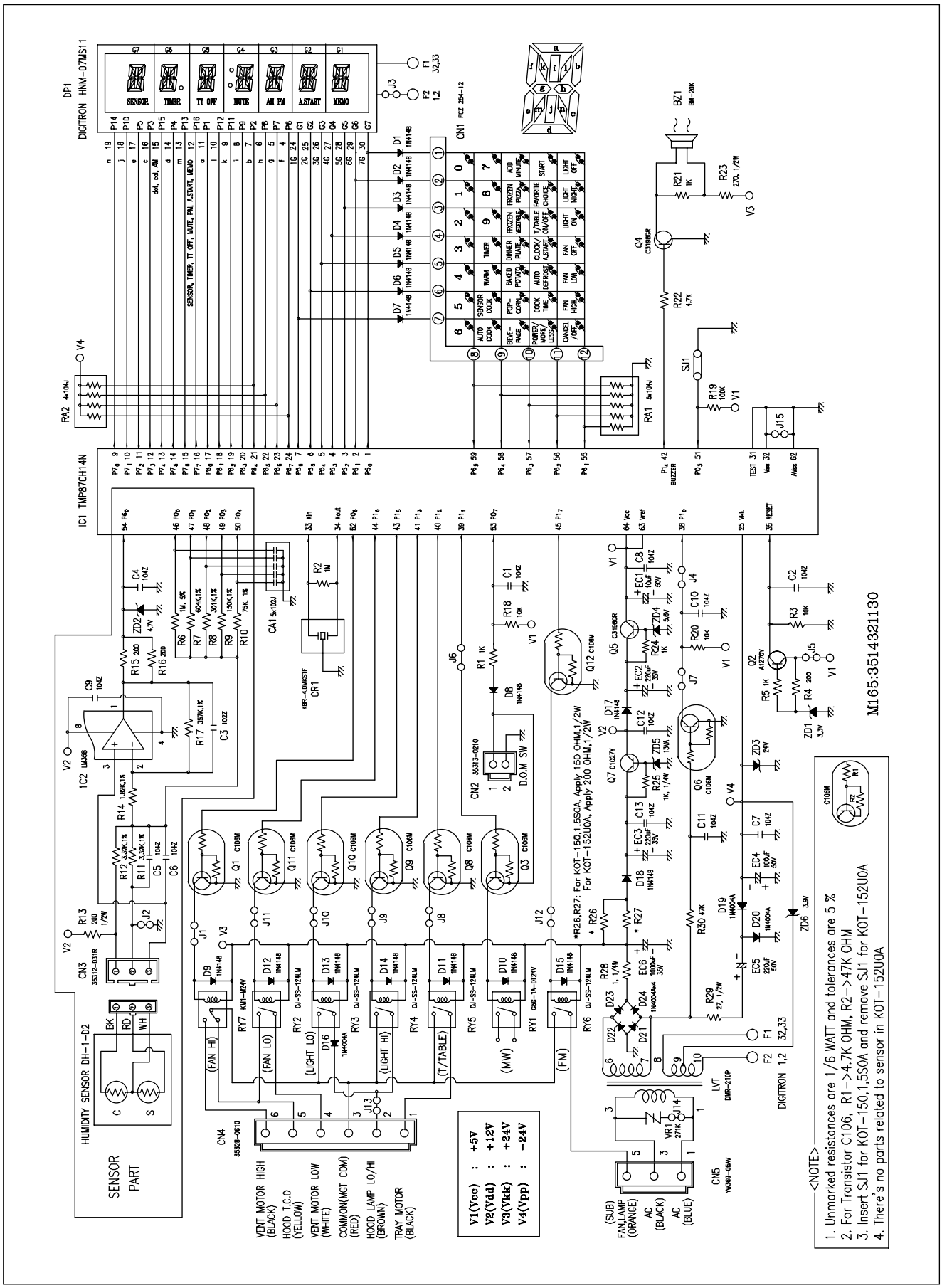
ZENER DIODE CATHODE(K) ANODE(A) ZD1-6

3. PRINTED CIRCUIT BOARD FILM




DIPPING
M165, S/N:3514321130
DP1
RA2
D1
D2
D3
D4
D5
D6
D7
D8
C1
R1
Q1
(TMP87CH14N)
IC1
CN1
R2
CR1
C2
R3
ZD1
R4
R5
R6
R7
R8
R9
R10
R11
R14
R15
R16
R17
R18
R19
SJ1
ZD2
C3
C4
RA1
J1
Q2
CA1
C5
C6
IC2
D.O.M
CN2
J2
R12
CN3
GND
SCR2
C7
ZD3
C8
D9
J3
R13
C9
EC1
+12V
J4
RY1
+5V
J5
Q3
J6
RY7
D10
Q4
R21
R22
R20
C10
ZD4
J7
Q5
Q6
R24
BZ1
EC2
C11
C12
J8
D11
R23
Q8
Q7
D17
VENT HIGH (BLK)
RY2
HOOD TCO (YEL)
D12
Q9
J9
RY3
D16
VENT LOW (WHT)
D13
J10
EC3
ZD5
COM MGT (RED)
D14
Q10
J11
RY4
R25
EC4
LIGHT (BRN)
D15
Q11
J12
C13
D18
RY5
Q12
J13
D19
(BLK) TRAY MOTOR
CN4
SCR1
R26
R27
D20
EC6
EC5
RY6
(ORG) LAMP
R28
+24V
LVT1
D21
(BLK) AC INPUT
(BLU)
D22
D23
D24
R29
R30
ZD6
CN5
VR1
J14
S1
S2
DAEWOO

4. PCB CIRCUIT DIAGRAM



5. PCB LOCATION NO

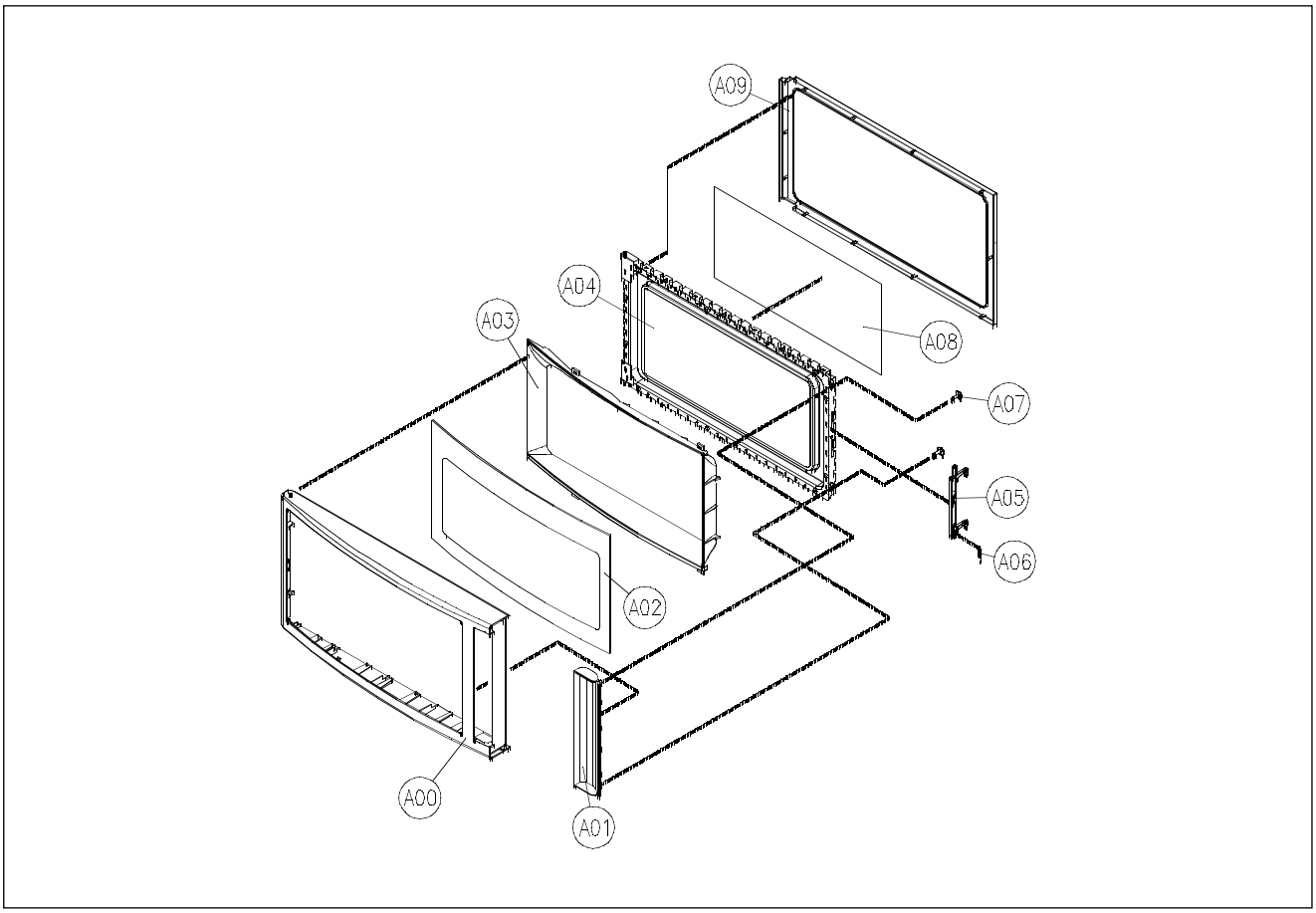
NO	NAME	SYMBOL	SPECIFCATION	PART CODE	Q'TY	REMARK
1	BUZZER	BZ1	BM-20K	3515600100	1	
2	CAPACITOR ARRAY	CA1	6P(5) 102 M 50V	CN5XB-102M	1	
3	CAPACITOR CERAMIC	C1, C2, C7, C8, C10~13	104 50V Z AXIAL	CCZF1H104Z	8	
4	CAPACITOR CERAMIC	C3	102 50V Z AXIAL	CCZB1H102K	1	KOT-150S KOT-151S KOT-155S
5	CAPACITOR CERAMIC	C4, C5, C6, C9	104 50V Z AXIAL	CCZF1H104Z	4	KOT-150S KOT-151S KOT-155S
6	CAPACITOR ELECTRO	EC1	50V RS 10μF	CEXE1H100A	1	
7	CAPACITOR ELECTRO	EC2, EC3	35V RSS 200μF	CEXF1V221V	2	
8	CAPACITOR ELECTRO	EC4	50V RSS 100μF	CEXF1H101V	1	
9	CAPACITOR ELECTRO	EC5	50V RSS 220μF	CEXF1H221V	1	
10	CAPACITOR ELECTRO	EC6	35V RSS 1000μF	CEXF1V102V	1	
11	CONNECTOR FILM	CN1	FCZ 254-12	441M367170	1	
12	CONNECTOR WAFER	CN2	35313-0210	30166M7020	1	
13	CONNECTOR WAFER	CN3	35312-031R	30166M503R	1	KOT-150S KOT-151S KOT-155S
14	CONNECTOR WAFER	CN4	35328-0610	4CW3061MXO	1	
15	CONNECTOR WAFER	CN5	YM396-05VA	3519150510	1	
16	DIODE SWITCHING	D1~D15, D17, D18	1N4148 AUTO 52mm	DZN4148---	17	
17	DIODE RECTIFYING	D16, D19~D24	1N4004A AUTO 52mm	DZD4004A--	7	
18	DIODE ZENER	ZD1	UZ-3.3BSB	DZUZ3R3BSB	1	
19	DIODE ZENER	ZD2	UZ-4.7BSB	DZUZ4R7BSB	1	KOT-150S KOT-151S KOT-155S
20	DIODE ZENER	ZD3	UZ-24BSB	DZUZ24BSB-	1	
21	DIODE ZENER	ZD4	UZ-5.6BSB	DZUZ5R6BSB	1	
22	DIODE ZENER	ZD5	UZ-13BSA	DZUZ13BSA-	1	
23	DIODE ZENER	ZD6	UZ-3.9BSB	DZUZ3R9BSB	1	
24	DIGITRON	DP1	HNM-07MS11	DHNM07MS11	1	
25	HOLDER VFD	DPH	PP	3513001400	1	
26	IC MICOM	IC1	TMP87CH14N	13GS150S01	1	
27	IC	Ic2	LM358(OP AMP)	1lM385----	1	KOT-150S KOT-151S KOT-155S
28	PCB MAIN	M165	M165	3514321130	1	
29	RESISTOR	R1, R5, R21, R24	1/6W 1K 0hm 5%	RD-AZ102J	4	
30	RESISTOR	R2	1/6W 1M Ohm 5%	RD-AZ105J-	1	
31	RESISTOR	R3, R18, R20	1/6W 10K Ol m 5%	RD-AZ103J-	3	
32	RESISTOR	R4	1/6W 200 Ohm 5%	RD-AZ201J-	1	
33	RESISTOR	R6	1/6 1M Ohm 5%	RD-AZ105J-	1	KOT-150S KOT-151S KOT-155S
34	RESISTOR	R7	1/6W 604K Ohm 1%	RN-AZ6043F	1	KOT-150S KOT-151S KOT-155S

NO	NAME	SYMBOL	SPECIFCATION	PART CODE	Q'TY	REMARK
35	RESISTOR	R8	1/6W 301K OHM 1%	RN-AZ3013F	1	KOT-150S KOT-151S KOT-155S
36	RESISTOR	R9	1/6W 150K Ohm 1%	RN-AZ1503F	1	KOT-150S KOT-151S KOT-155S
37	RESISTOR	R10	1/6W 75K Ohm 1%	RN-AZ7502F	1	KOT-150S KOT-151S KOT-155S
38	RESISTOR	R11, R12	1/6W 3.32K Ohm 1%	RN-AZ3321F	1	KOT-150S KOT-151S KOT-155S
39	RESISTOR	R13	1/2W 200 Ohm 5%	RD-2Z201JS	2	KOT-150S KOT-151S KOT-155S
40	RESISTOR	R14	1/6W 1.82K Ohm 1%	RN-AZ1821F	1	KOT-150S KOT-151S KOT-155S
41	RESISTOR	R15, R16	1/6W 200 Ohm 5%	RD-AZ201J-	2	KOT-150S KOT-151S KOT-155S
42	RESISTOR	R17	1/6W 357K OHM 1%	RN-AZ3573F	1	KOT-150S KOT-151S KOT-155S
43	RESISTOR	R19	1/6W 100K Ohm 5%	RD-AZ104J-	1	
44	RESISTOR	R22	1/6W 4.7K Ohm 5%	RD-AZ472J-	1	
45	RESISTOR	R23	1/2W 270 Ohm 5%	RD-2Z271JS	1	
46	RESISTOR	R25	1/4W 1K Ohm 5%	RD-4Z102J-	1	
47	RESISTOR	R26, R27	1/2W 200 Ohm 5%	RD-2Z201JS	2	
			1/2W 150 Ohm 5%	RD-2Z151JS	2	KOT-150S KOT-151S KOT-155S
48	RESISTOR FUSIBLE	R28	1/4W 1 Ohm 5%	RF-AZ109J-	1	
49	RESISTOR	R29	1/2W 27 Ohm 5%	RD-2Z270JS	1	
50	RESISTOR	R30	1/6W 47K Ohm 5%	RD-AZ473J-	1	
51	RESISTOR ARRAY	RA1	6P(5) 1/8 100K 5%	RA-86X104J	1	O.T.P
52	RESISTOR ARRAY	RA2	5P(4) 1/8 100K 5%	RA-85X104J	1	
53	RESONATOR CERAMIC	CR1	KBR-4.0MKSTF	5PKBR40MKS	1	
54	SW RELAY	RY1	G5G-1ADT 24V	5SC0101124	1	
55	SW RELAY	RY2~RY6	OJ-SS-124LM	5SC0101405	5	
56	SW RELAY	RY7	KM1-M24V 1C-2P	5SC0102115	1	
57	TRANSISTOR	Q1,Q3,Q6,Q8~Q12	KRC106M AUTO	TZRC106M--	8	
58	TRANSISTOR	Q2	KTA1270T AUTO	TZTA1270Y-	1	
59	TRANSISTOR	Q4, Q5	KTC3198GR AUTO	TZTC3198GR	2	
60	TRANSISTOR	Q7	KTC-1027Y AUTO	TZTC1027Y-	1	
61	TRANS POWER	LVT	DMR-210P	5EPU041351	1	
62	VARISTOR	VR1	TNR15G271K	DTNR15G271	1	
63	WIRE COPPER 7.5mm	J1, J3, J6, J7	1/0.52 TIN COATING	85801052GY	4	
64	WIRE COPPER 15mm	J2, J5, J15	1/0.52 TIN COATING	85801052GY	3	
65	WIRE COPPER 12.5mm	J4	1/0.52 TIN COATING	85801052GY	1	
66	WIRE COPPER 10mm	J8~J12	1/0.52 TIN COATING	85801052GY	5	
67	WIRE COPPER 7.5mm	SJ1	1/0.52 TIN COATING	85801052GY	1	KOT-150S KOT-151S KOT-155S

EXPLODED VIEW AND PARTS LIST

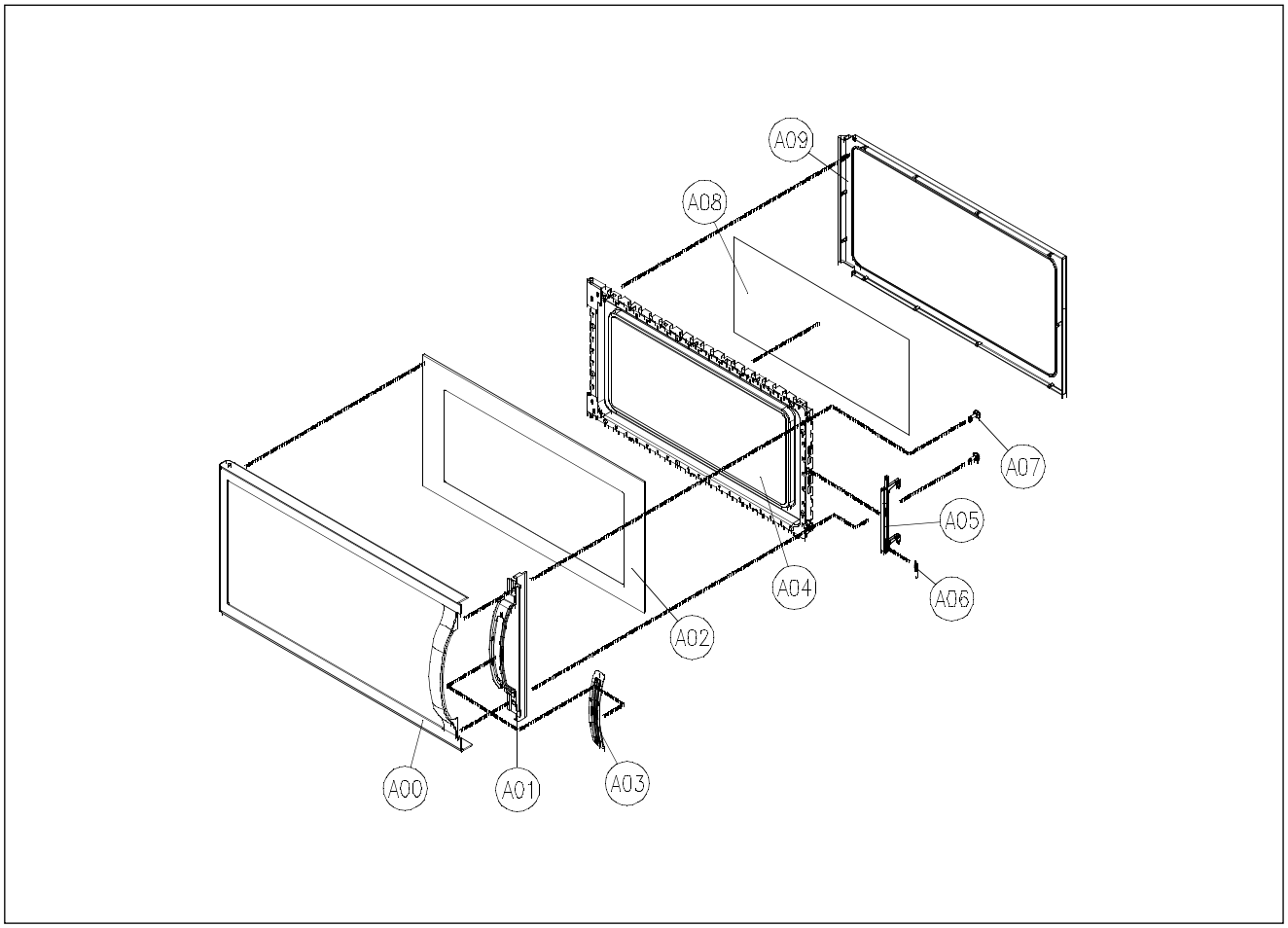
1. DOOR ASSEMBLY

1) KOT-150S0A



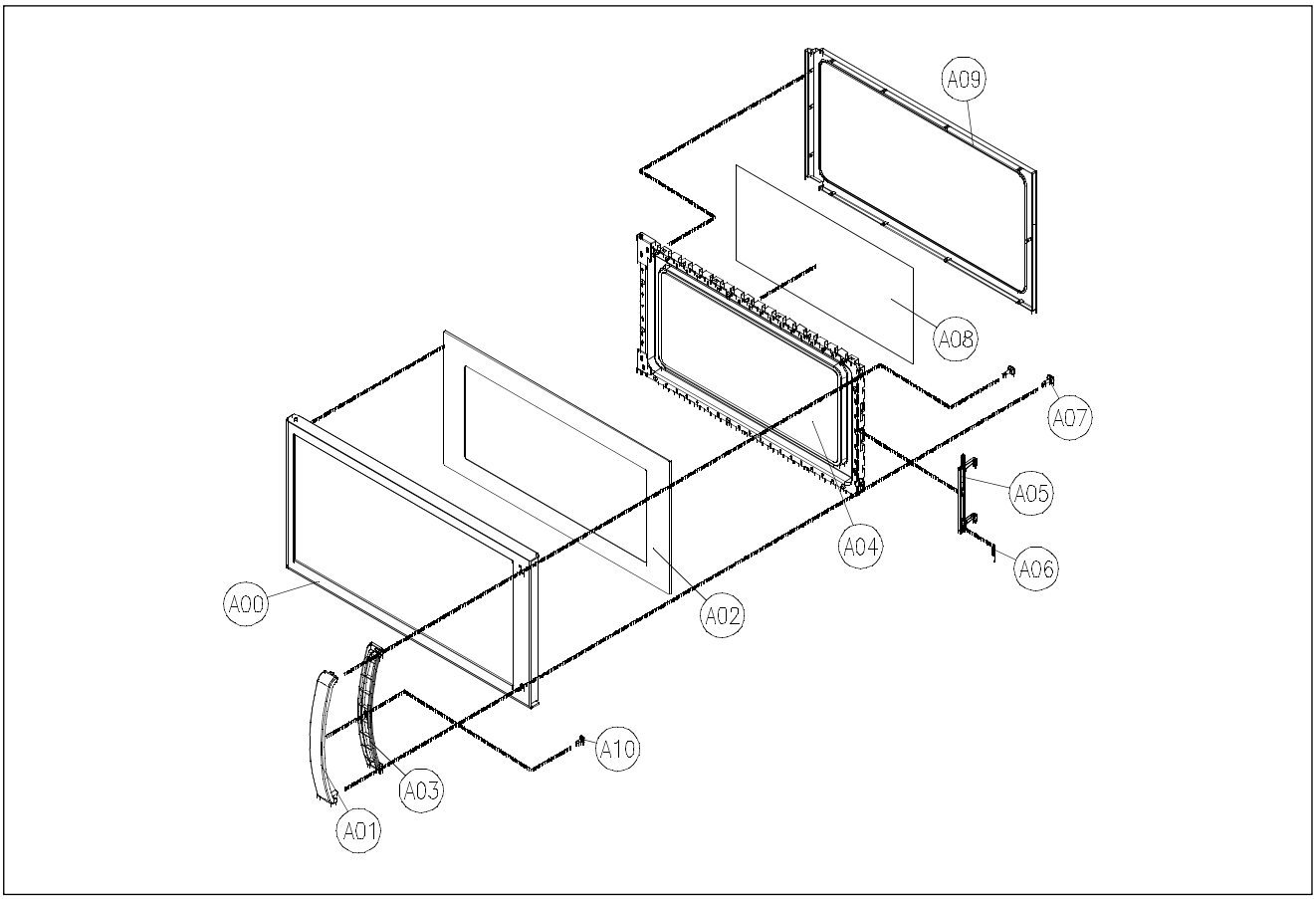
REF. NO.	PART NAME	DESCRIPTION	PART CODE	Q'TY	REMARK
A00	FRAME DOOR	PC	3512204400	1	BLACK BISQUE WHITE
A01	HANDLE DOOR *I	PC	3512602900	1	BLACK BISQUE WHITE
A02	BARRIER SCREEN *O	TEMP GLASS T3.2	3517006200	1	BLACK BISQUE WHITE
A03	SUPPORTER BARR-S *O	ABS XR-401 H-2938	3515307000	1	BLACK BISQUE WHITE
A04	DOOR PAINTING AS	KOT-150S0A	3511712300	1	BLACK BISQUE WHITE
A05	HOOK	POM	3513101200	1	
A06	SPRING HOOK	PW1	3515101800	1	
A07	SCREW TAPPING	T2S TRS 4X12 MFZN	7122401211	2	
A08	BARRIER SCREEN *I	PE T0.1	3517006300	1	
A09	GASKET DOOR	PP 5113MF6 A353B BK	3512302100	1	

2) KOT-151S0A



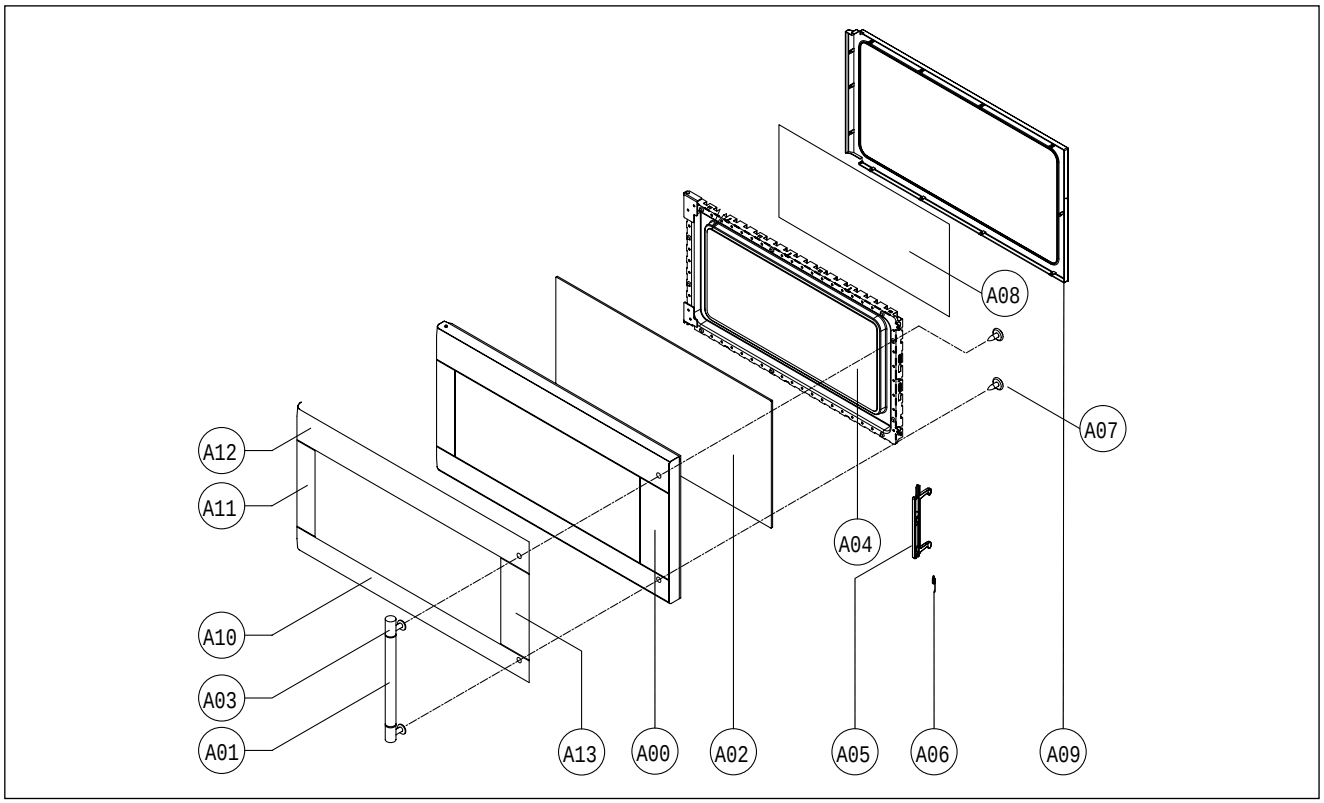
REF. NO.	PART NAME	DESCRIPTION	PART CODE	Q'TY	REMARK
A00	FRAME DOOR	PC	3512204410	1	BLACK
					BISQUE
					WHITE
A01	HANDLE DOOR *I	PC	3512602910	1	BLACK
					BISQUE
					WHITE
A02	BARRIER SCREEN *O	TEMP GLASS T3.2	3517006210	1	BLACK
					BISQUE
					WHITE
A03	FRAME DOOR HANDLE	SILICON RUBBER	3517304100	1	
A04	DOOR PAINTING AS	KOT-150S0A	3511712300	1	BLACK
					BISQUE
					WHITE
A05	HOOK	POM	3513101200	1	
A06	SPRING HOOK	PW1	3515101800	1	
A07	SCREW TAPPING	4TS8	7122400811	2	
A08	BARRIER SCREEN *I	PE T0.1	3517006300	1	
A09	GASKET DOOR	PP 5113MF6 A353B BK	3512302100	1	

3) KOT-152U0A, KOT-152C0A



REF. NO.	PART NAME	DESCRIPTION	PART CODE	Q'TY	REMARK
A00	FRAME DOOR	PC	3512204420	1	BLACK BISQUE WHITE
A01	HANDLE DOOR *I	PC	3512603000	1	BLACK BISQUE WHITE
A02	BARRIER SCREEN *O	TEMP GLASS T3.2	3517006220	1	BLACK BISQUE WHITE
A03	HANDLE DOOR *I	PC	3512602920	1	BLACK BISQUE WHITE
A04	DOOR PAINTING AS	KOT-150S0A	3511712300	1	BLACK BISQUE WHITE
A05	HOOK	POM	3513101200	1	
A06	SPRING HOOK	PW1	3515101800	1	
A07	SCREW TAPPING	T2S TRS 4X12 MFZN	7122401211	2	
A08	BARRIER SCREEN *I	PE T0.1	3517006300	1	
A09	GASKET DOOR	PP 5113MF6 A353B BK	3512302100	1	
A10	SCREW TAPPING	T2S PAN 3X6 MFZN	7121300611	1	

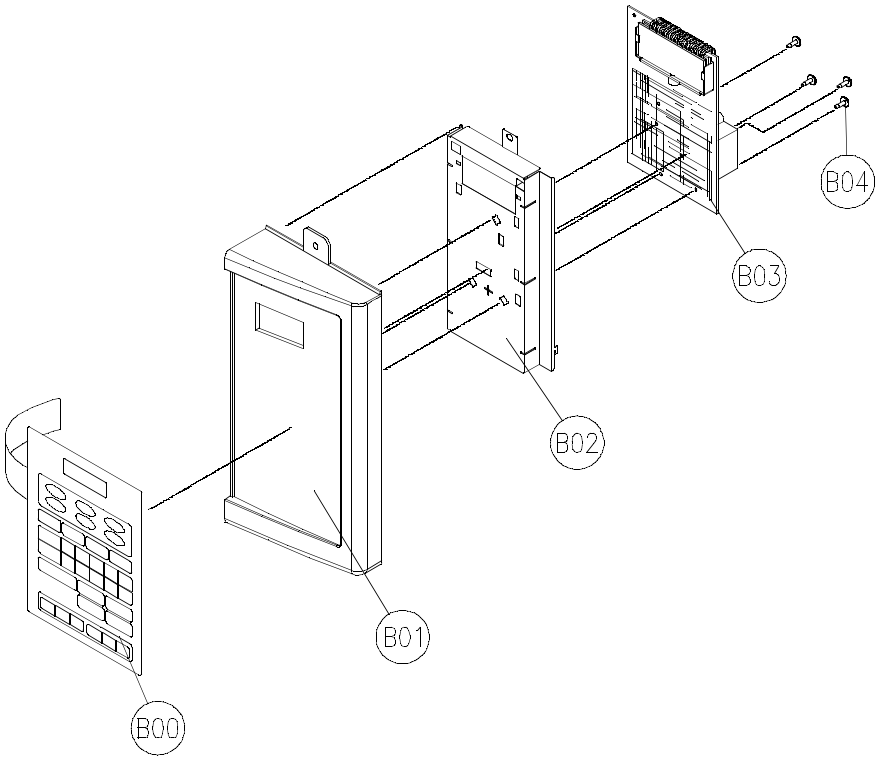
4) KOT-155S0A



REF. NO.	PART NAME	DESCRIPTION	PART CODE	Q'TY	REMARK
A00	FRAME DOOR	PC	3512204430	1	BLACK BISQUE WHITE
A01	HANDLE DOOR	PC	3512604400	1	BLACK BISQUE WHITE
A02	BARRIER SCREEN *O	TEMP GLASS T3.2	3517006280	1	BLACK BISQUE WHITE
A03	SUPPORTER HANDLE	PC	3515307910	1	BLACK BISQUE WHITE
A04	DOOR PAINTING AS	KOT-150S0A	3511712300	1	BLACK BISQUE WHITE
A05	HOOK	POM	3513101200	1	
A06	SPRING HOOK	PW1	3515101800	1	
A07	SCREW TAPPING	T2S TRS 4X16 MFZN	7122401611	2	
A08	BARRIER SCREEN *I	PE T0.1	3517006300	1	
A09	GASKET DOOR	PP 5113MF6 A353B BK	3512302100	1	
A10	DECORATOR DOOR*U	SUS 430 T0.5 H/L	3511609100	1	
A11	DECORATOR DOOR*L	SUS 304 T0.5 H/L	3511608800	1	
A12	DECORATOR DOOR*T	SUS 430 T0.5 H/L	3511609000	1	
A13	DECORATOR DOOR*R	SUS 430 T0.5 H/L	3511608900	1	

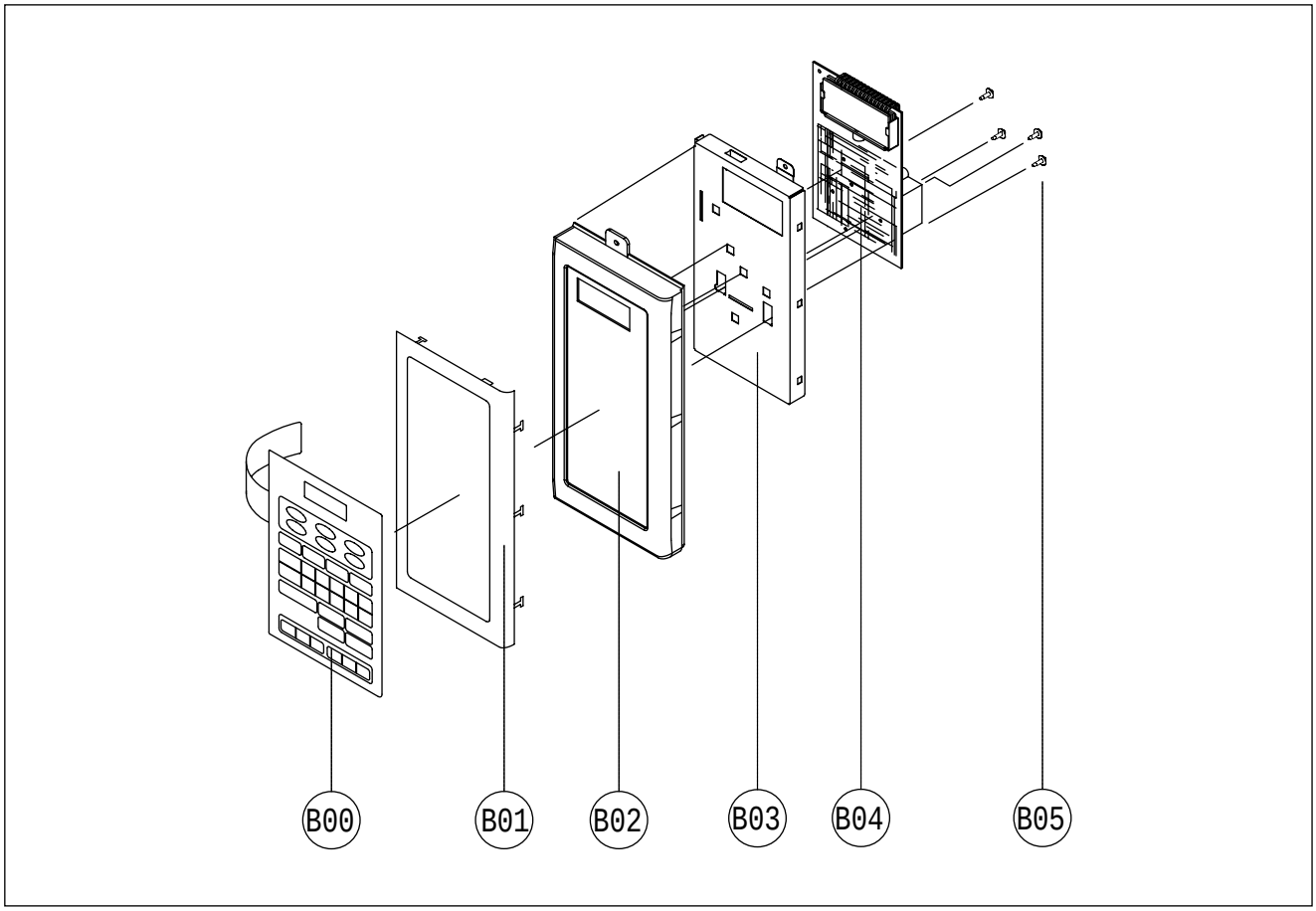
2. CONTROL PANEL ASSEMBLY

1) KOT-150S0A, KOT-151SOA, KOT-152U0A, KOT-152C0A



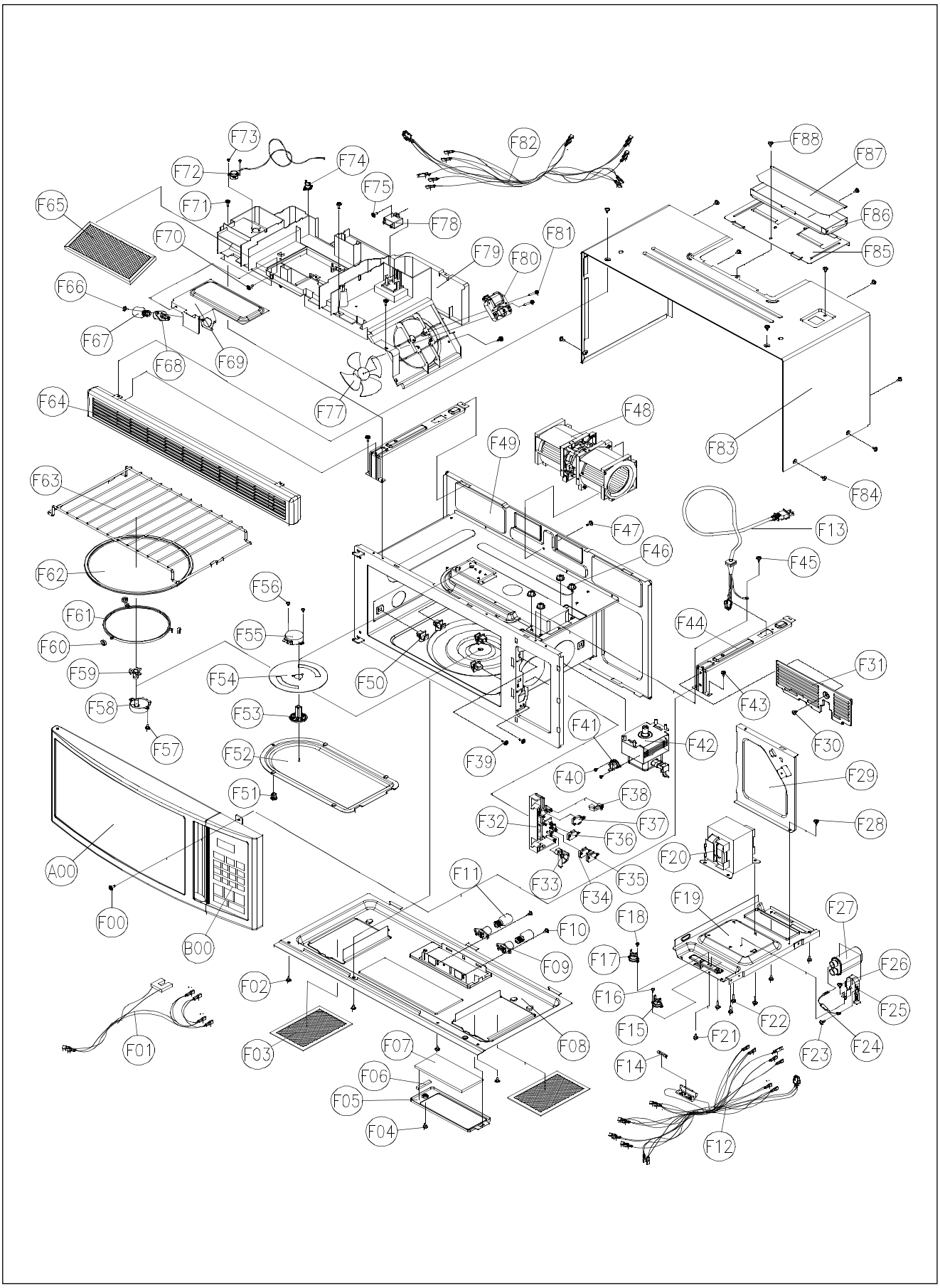
REF. NO.	PART NAME	DESCRIPTION	PART CODE	Q'TY	REMARK	
B00	SWITCH MEMBRANE	KOT-150S0A	3518522300	1		BLACK BISQUE WHITE
		KOT-151S0A	351822310	1		BLACK BISQUE WHITE
		KOT-152U0A	351822320	1		BLACK BISQUE WHITE
		KOT-152C0A	3518522330	1		BLACK BISQUE WHITE
B01	CONTROL PANEL	PC	3516722700	1	KOT-150S0A	BLACK BISQUE WHITE
		PC	3516722710	1	KOT-151S0A	BLACK BISQUE WHITE
		PC	3516722720	1	KOT-152U0A 152C0A	BLACK BISQUE WHITE
B02	BACK PLATE	SECC T0.6	3516802100	1	KOT-150S0A	
		SECC T0.6	3516802110	1	KOT-151S0A, 152U0A	
B03	PCB AS	KOT-150S0A, KOT-151S0A	3514324410	1		
		KOT-152U0A	3514324400	1		
B04	SCREW TAPPING	T2S TRS 4X12 MFZN	7122401211	4		

2) KOT-155S0A



REF. NO.	PART NAME	DESCRIPTION	PART CODE	Q'TY	REMARK
B00	SWITCH MEMBRANE	KOT-155S0A	3518522340	1	BLACK BISQUE WHITE
B01	DECORATOR C-PANEL	STS430 T0.5	3511609200	1	
B02	CONTROL PANEL	PC	3516722730	1	BLACK BISQUE WHITE
B03	BACK PLATE	SECC T0.6	3516802110	1	KOT-155S0A
B04	PCB AS	KOT-155S0A	3514324410	1	
B05	SCREW TAPPING	T2S TRS 4X12 MFZN	7122401211	4	

3. TOTAL ASSEMBLY



REF. NO.	PART NAME	DESCRIPTION	PART CODE	Q'TY	REMARK
A00	DOOR AS	KOT-150S0A	3511712200	1	BLACK
					BISQU
					WHITE
		KOT-151S0A	3511712210	1	BLACK
					BISQUE
					WHITE
		KOT-152U0A, KOT-152C0A	3511712220	1	BLACK
					BISQUE
					WHITE
		KOT-155S0A	3511712250	1	BLACK
					BISQUE
					WHITE
B00	CONTROL PANEL AS	KOT-150S0A	PKCPSWLA00	1	BLACK
					BISQUE
					WHITE
		KOT-151S0A	PKCPSWLD00	1	BLACK
					BISQUE
					WHITE
		KOT-152U0A	PKCPSWLF00	1	BLACK
					BISQUE
					WHITE
		KOT-152C0A	PKCPSWLF10	1	BLACK
					BISQUE
					WHITE
		KOT-155S0A	PKCPSWLD10	1	BLACK
					BISQUE
					WHITE
F00	SCREW TAPPIMG	TI TRS 4X10 MFZN	7112401011	1	
F01	HARNESS LAMP	KOT-150S0A	3512766700	1	
F02	SCREW TAPPING	TI TRS 4X10 MFZN	7112401011	1	
F03	FILTER AIR	AL	3511900200	2	
F04	SCREW TAPPING	TI TRS 4X10 MFZN BK	7112401012	1	
F05	BRACKET LAMP COVER	SECC T0.5 M/GY	3510605000	1	
F06	FOAM	UR 5TX10X60	3517303300	1	
F07	COVER LAMP	GLASS T3.0	3511405500	1	
F08	PALTE *B PAINTING AS	KOT-150S0A	3514501500	1	BLACK
					BISQUE
					WHITE
F09	HOLDER LAMP	PENOL 250V 75W	3513003000	2	
F10	SCREW TAPPING	TI TRS 4X10 MFZN	7112401011	2	
F11	LAMP	BL 125V 30W T25 C7A #187	3513602400	2	

REF. NO.	PART NAME	DESCRIPTION	PART CODE	Q'TY	REMARK
F12	HARNESS MAIN	KOT150S0A	3512717100	1	
F13	CORD POWER AS	3X14AWG 80X80 250-RTML	35113UDNY8	1	
F14	FUSE CERA	UL/CSA 65TS 125V 20A	5F1CD2031S	1	
F15	THERMOSTAT	OFF:40 ON:56 V#250	3518905500	1	
F16	SCREW TAPPING	T2S PAN 4X6 MFZN	7121400611	1	
F17	THERMOSTAT	OFF:90 ON:0 V#187	3518904800	1	
F18	SCREW TAPPING	T2S PAN 4X6 MFZN	7121400611	1	
F19	BASE*R	SBHG T0.8	3510312900	1	
F20	TRANS HV	DY-N10A0-15T	3518116300	1	
F21	SCREW TAPPING	TI TRS 4X10 MFZN	7112401011	3	
F22	SPECIAL SCREW	TT2 HEX 4X8 FLG MFZN	3516003700	4	
F23	SCREW TAPTITE	TT3 TRS 4X8 MFZN	7272400811	1	
F24	DIODE HV	SANKEN HVR-1X-32B(D5.3)	4416V24000	1	
F25	HOLDER HV CAPACITOR	SECC T0.8	3513001900	1	
F26	SCREW TAPPING	TI TRS 4X10 MFZN	7112401011	1	
F27	CAPACITOR HV	2100VAC 0.98UF #250 +3-0%	3518302800	1	
F28	SCREW TAPPING	TI TRS 4X10 MFZN	7112401011	1	
F29	GUIDE AIR OUTLET	SECC T0.5	3512519000	1	
F30	SCREW TAPPING	TI TRS 4X10 MFZN	7112401011	1	
F31	PROTECTOR WIRE	SECC T0.6	3515703700	1	
F32	LOCK	POM	3513804700	1	
F33	LEVER LOCK	POM	3513700800	1	
F34	SW MICRO	VP531A-OF/SZM-V16-FA-61	4415A66910	1	SECONDARY
F35	SW MICRO	VP533A-OF SPNO #187 200G	4415A17352	1	LAMP
F36	SW MICRO	VP532A-OF SPNC #187 200G	4415A66600	1	MONITOR
F37	SW MICRO	VP533A-OF SPNO #187 200G	4415A17352	1	PRIMARY
F38	LEVER SW MICRO	POM	3513702100	1	
F39	SCREW TAPPING	T2S TRS 4X12 MFZN	7122401211	1	
F40	SCREW TAPPING	T2S PAN 3X6 MFZN	7121300611	2	
F41	THERMOSTAT	OFF:150 ON:60 V#187	3518903400	1	
F42	MAGNETRON	2M218H(KP)	3518003100	1	
F43	SCREW SPECIAL	TI TRS 4X16 SE MFZN	7S312X40D1	1	
F44	SUPPORTER RANGE MT	SBHG T0.8	3515306900	2	
F45	SCREW SPECIAL	T1 TRS 4X16 SE MFZN	7S312X40D1	3	
F46	NUT HEX	NUT FLANGE M5X0.8P MFZN	7S627W50X1	4	
F47	SCREW TAPPING	TI TRS 4X10 MFZN	7112401011	1	
F48	MOTOR CONDENSOR	120-127V 60HZ W1D46JA002	3964821200	1	
F49	CAVITY AS	KOT-150S0A	3516110600	1	
F50	GUIDE TRAY RACK	POLYSULFONE	3512515900	4	
F51	BUTTON LOCKING	PP HONAM A353B	4078502031	1	
F52	COVER STIRRER	PP 5113MF6 A353B	3511406800	1	

REF. NO.	PART NAME	DESCRIPTION	PART CODE	Q'TY	REMARK
F53	COUPLER STIRRER	PPS	3517401800	1	
F54	STIRRER BLADE	AL050-H18 T0.7	3517100900	1	
F55	MOTOR SYNCRO	120V 2.4W ST-16 KX63MRAA	3966820710	1	
F56	SCREW TAPPING	T2S PAN 4X6 MFZN	7121400611	2	
F57	SCREW TAPPING	T2S PAN 4X6 MFZN	7121400611	1	
F58	MOTOR SYNCRO	120V 2.4W ST-16 KX63XOAD	3966820810	1	
F59	COUPLER	PPS	3517400600	1	
F60	ROLLER	TELON D:14.5	3514701501	3	
F61	GUIDE ROLLER	PP	3512519300	1	
F62	TRAY	BORO-S1 GLASS (NEG)	441X335A10	1	
F63	TRAY RACK	MSWR-3	3517207100	1	
F64	GRILLE AIR	PC	3512400300	1	BLACK BISQUE WHITE
F65	FILTER CHARCOAL	AL	3511900300	1	
F66	SCREW TAPPING	TI TRS 4X10 MFZN	7112401011	1	
F67	LAMP	BL 125V 30W T25 C7 #187	3513602400	1	
F68	HOLDER LAMP	PENOL 250V 75W	3513003000	1	
F69	COVER MOTOR SYNCRO	SECC T0.5	3511406700	1	
F70	SCREW SPECIAL	T1 TRS 4X16 SE MFZN	7S312X40D1	1	
F71	SCREW SPECIAL	T1 TRS 4X16 SE MFZN	7S312X40D1	3	
F72	SENSOR HUMIDITY	DH-1-D2	35148101200	1	
F73	SCREW TAPPING	T2S PAN 3X6 MFZN	7121300611	2	
F74	THERMOSTAT	OFF:90 ON:0 V#187	3518904800	1	
F75	SCREW SPECIAL	T1 TRS 4X16 SE MFZN	7S312X40D1	1	
F76	FAN	PP GF20	3511800100	1	
F77	CAPACITOR RUNNING	250VAC 6.0UF	3518301100	1	
F78	GUIDE AIR *T	PP 5101SW BK	3512519100	1	
F79	MOTOR SHADED POLE	120V 60HZ MW15XA-P02	3963822400	1	
F80	SCREW TAPPING	T2S PAN 4X30 MFZN	7121403011	2	
F81	HARNESS THERMOSTAT	KOT-150S0A	3512766600	1	
F82	CABINET	PCM OR PAINTED STEEL	3510802900	1	BLACK BISQUE WHITE
F83	SCREW TAPPING	TI TRS 4X10 MFZN BK	7112401012	7	
F84	COVER MOTOR CONDENSOR	SBHG T0.6	3511405200	1	
F85	GUIDE DAMPER	SECC T0.5	3512516500	1	
F86	VALVE DAMPER	ET T0.21	3515400400	1	
F87	SCREW TAPPING	TI TRS 4X10 MFZN	7112401011	2	

DAEWOO

DAEWOO ELECTRONICS CO., LTD.
686, AHYEON-DONG MAPO-GU SEOUL, KOREA
C.P.O. BOX 8003 SEOUL, KOREA
TELEX: DWELEC K28177-8
CABLE: “DAEWOOELEC”

S/M NO. : T150S0A003

PRINTED DATE: Feb, 2002